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ABSTRACT

This paper reports on an exploratory study which used Flanagan's Critical Incident Technique to examine students' experiences in taking their first distance education course. Specifically, the study asked what incidents hindered or facilitated persistence in the course, and if reports of experiences from completers of the course were different from those of non-completers. The 40 subjects for the sample were drawn at random from selected courses at Athabasca University, an open admission distance education institution serving students across Canada. Thirteen categories of student experience were noted, including student interaction with the institution, course content and design, pre-course preparation and prior expectations, and support from sources outside the university. It was further discovered that significant factors affecting attrition included: (1) background and defining characteristics of the student such as age, enrollment status, and gender; (2) academic variables such as study habits and course availability; (3) environmental variables such as finances, hours of employment, outside encouragement, and family responsibility; and (4) psychological variables such as perceived utility of studies, satisfaction, goal commitment, and stress. It is concluded that if retention strategies can be developed which will change students' experiences or the way in which they perceive or respond to certain experiences, attrition rates may be lowered. (DB)

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ATTRITION AND COMPLETION IN DISTANCE EDUCATION: THE STUDENT'S PERSPECTIVE

by

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B.A., University of Alberta, 1976

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
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in

THE FACULTY OF GRADUATE STUDIES
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We accept this thesis as conforming
to the required standard

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ABSTRACT

This was an exploratory study which used Flanagan's (1954) Critical Incident Technique to examine students' experiences in taking their first distance education course. Specifically, the study asked what incidents hindered or facilitated persistence, and if reports of experiences from completers were different from those of non-completers. The 40 subjects for the sample were drawn at random from selected courses at Athabasca University, an open admission distance education institution serving students across Canada.

All students were able to identify incidents which hindered or facilitated their progress. A mean of 6.6 incidents was reported per student. From the 265 incidents reported, 13 Basic Categories were formed, with a reliability of 94%. Only one category had less than 20% of students reporting in it. The highest proportion of students reporting in one category was 80%.

Significant factors affecting attrition in distance education emerged from the study, as did findings about the similarities and differences between the experiences of completers and non-completers. Suggestions for how the findings might contribute to the development of a model of attrition and retention strategies are included in the discussion.

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CHAPTER I

INTRODUCTION

Background: Distance Education as the Answer for Adult Learners

During the past three decades in North America, demographic, social, and technological changes have acted as catalysts in sending adults back into the educational system. The move toward recurrent and further education by the post-university age individual is striking. Every year more adults are participating in formal education, and demographic projections indicate that this trend will continue, while the numbers of younger students will diminish (Brodzinski, 1980; Greenfeig and Goldberg, 1984; Report of Task Force on Mature Students, 1983).

During the past 10 to 15 years, North American colleges and universities have begun to recognize this trend and have attempted to accommodate the adult student in a number of ways (Cross, 1981). However, despite their determined efforts to become more accessible to this population, there are still major obstacles facing the adult returning to a traditional institution. Many adults believe that education is still too rigid in its formal requirements, is still too costly, and is typically unavailable at the times

and places most needed (Heffernan, Macy, and Vickers, 1976; Taaffe and Rocco, 1981; Report of Task Force on Mature Students, 1983).

In the face of these barriers to further education, adults have demanded new modes of learning. Distance education, because of its flexible nature, has been heralded by some as the key to providing learning situations which can be adapted to the individual requirements of adults leading complex lives in which being a student is only one of many roles. Athabasca University in Alberta, Tele-universite in Quebec, and the Open Learning Institute in British Columbia are three Canadian institutions which are attempting to provide university level education through distance learning methods for adults who either cannot or choose not to attend a traditional campus-based university. Self-reports from their students indicate that adults find distance education an attractive option for reasons of economics, time flexibility, and geography (Smyrnew, 1983; Tele-universite, 1986). And enrolment statistics from these institutions indicate that distance education institutions may be the fastest growing alternative in the post-secondary scene in Canada (AU Trends, #1, 1985; Tele-universite, 1986). While it is true that distance education institutions have removed many of the traditional barriers to adult participation which are cited in the literature, and the majority of distance learners are adults (Coldeway, 1982b, 1986; Holmberg,

1982), the results achieved by this mode of study are not as successful as originally hoped. Distance education universities throughout the world appear to have high attrition rates relative to those of traditional universities (Losty and Broderson, 1980; Shale, 1982; van Wijk, 1983; Holmberg, 1982). The drop-out issue is a major concern for distance educators. Indeed, it has been said that the rate of drop-out constitutes the most significant criterion for decisions about improvements or changes to systems of distance education (Rekkedal, 1981). At the most recent conferences of the International Council of Distance Education (Vancouver, 1982, and Melbourne, 1985), a number of the papers given, and much of the discussion among delegates focussed on the description of the attrition problem and treatments for it.

At institutions such as Athabasca University, where flexibility and an open approach to education is reflected not only in the use of distance distance teaching methods, but also in an open admissions policy, the problem of attrition is of even greater concern than at distance teaching institutions where traditional entrance requirements are maintained. The ideals of an institution such as Athabasca University must be balanced against the actual experience it provides for students. Currently, the attrition rate at Athabasca is approximately 56% across all courses (AU Trends, #2, 1985, p. 6). It has been said that there is a risk of the open door becoming a revolving door (Paul, 1986,

p. 138) where students are encouraged to enrol in a course, and then find themselves unable to complete it. Clearly, if distance education is to become a major shaping force in societies all over the world, as suggested in the preface to Learning at a Distance (Daniel, Stroud, and Thompson, 1982), the issue of attrition will have to be examined in much greater detail so that the experience of students can be more fully understood, and treatments can be applied which will encourage students to persist. As Finkel (1982) points out, adult students should not have to balance the convenience of learning in their own home against the likelihood of failure if they choose distance education as their mode of study.

Statement of Problem and Purpose of the Study

It is a dilemma, from an institutional perspective, that so many distance education students choose not to continue toward a goal which they have chosen for themselves. Particularly for institutions such as Athabasca University where there is a strong commitment to the removal of barriers from the path of the adult learner, it is imperative to find out more about the experiences of students which lead them to withdraw or persist with their study.

The purpose of this exploratory study is to examine students' experiences in their homestudy courses, specifically, to find out if they can identify significant concrete

incidents which either facilitate or hinder their study, to see what kinds of common experiences students report, and hence to track the students' performance to find if experiences reported by completers are different or similar in any way to those of non-completers. The results of the study will be used to identify significant factors which might contribute to a theoretical model of attrition and to propose retention strategies for the adult distance learner.

The information about students' experiences will be gathered using the Critical Incident Technique developed by John Flanagan (1954). It is an interview method for soliciting concrete incidents which facilitate or hinder some aim, in this case, course completion.

Definition of Terms

Definitions are provided for the following terms which are used in particular ways in this study:

(1) Completion/Persistence - completing all requirements and receiving a final grade in a course-refers to the behaviour of a student in a single course, ie.: a persister/completer.

(2) Attrition/Drop-Out/Non-Completion - enrolling in a course but not completing the entire course - refers to the behaviour of a student in a single course, ie.: a non-completer. It includes a variety of behaviours

such as voluntarily withdrawal, not starting, or stopping part way through the course.

(3) Experience/Incident - a thought, feeling, an action, an observation, or an event which is identifiable by the individual subject as having occurred.

(4) Facilitates - makes a difference to the planned outcome or chosen goal in a positive way.

(5) Hinders - makes a difference to the planned outcome or chosen goal in a negative way.

Research Questions and Rationale

Each year, as increasing numbers of adult students choose distance education for their learning resource, it becomes more important that institutions offer them the best opportunity for success. The ultimate rationale for this study is to see how the data collected might inform planning for student support services in a distance education institution. If there are "avoidable" drop-outs, then self-reports of students should be valuable information which can be applied to institutional strategies to reduce non-completion.

This study addresses three questions in this regard:

(1) What experiences do students identify as being significant in hindering or facilitating completion of a distance education course?

(2) Are the experiences of completers and non-completers different or similar in any way?

(3) How can the self-reported experiences of distance learners contribute to the development of a model of attrition and retention strategies for distance education students?

Setting

The study examines the attrition phenomenon at Athabasca University, a distance education institution serving a population of approximately 8,000 students across Canada (primarily in Alberta and British Columbia). Athabasca University specializes in distance education involving a variety of media, primarily print and telephone, but including audio and video tapes, television, and teleconferencing. The institution currently offers baccalaureate degrees in arts and science, and administrative studies, as well as a number of transfer programs. Students are predominantly working adults, and the majority are female. The only admission requirement is that a student be 18 years of age or older. Students can enrol in most courses at any time of

the year, and proceed at their own pace within specified timelines, (six months for a half-year or semester course and twelve months for a full-year course).

A student who enrols in a course receives a package of instructional materials including textbooks, study guides, student manual, and other aids depending on the course and discipline. The student is also assigned to a telephone tutor who is a subject matter expert for that course, and whom the student may consult by telephone on a variety of issues. The overall attrition rate for Athabasca University courses is approximately 56% (AU Trends, #2, 1985, p. 6). This rate is consistent with that of other institutions of its type worldwide (Woodley and Parlett, 1983).

Delimitations of Study

Although the 40 subjects in the study were chosen at random from selected courses, they turned out to be representative of the total Athabasca University population in a number of important ways. (See description of subjects in Chapter III.) The results, therefore, should be generalizable to that population. Some caution should be used in generalizing the results across institutions, particularly where there are major differences such as entrance requirements. As well it should be noted that each year 60-70% of Athabasca University student body are new enrolments (AU

Trends #3, 1986, p. 4). Most AU students take only one or two courses (AU Trends, #3, 1986, p. 5). These students are not seeking a degree with Athabasca, but rather are interested only in taking individual courses. Their behaviour and motivations may be different from students who are committed to a program of studies leading to a degree. More comparison studies are needed before any conclusions are reached in this regard. This research included both program and non-program students.

Summary

Attrition has been identified as a problem by educational institutions for some time. The most often asked question is 'why do students drop out?'. This may well be an over-simplification of a very complicated process. Any person, when asked to give 'reasons' for his or her behaviour in a given situation, can usually produce a rationally based explanation that does not necessarily tap the complex interplay of thoughts, feelings, and actions which occurred prior to the incident and which were crucial to the type of behaviour exhibited in the situation.

The study undertaken does not attempt to address reasons why students drop out. It does recognize that if students are to be successful at pursuing an educational goal which they have chosen for themselves, they need to know the things they do which are effective and ineffective,

what things will help them or hinder them in attaining that goal. From an institutional point of view, "the goal of attrition research is first to obtain as complete an understanding as possible, and then to apply this knowledge to designing programs aimed at lowering attrition" (Pantages and Creedon, 1978, pp. 88-89). In order to propose counselling treatments, it is necessary to find out what actually hinders or facilitates course completion from both the successful and unsuccessful (in terms of course completion) student's point of view.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

There is a great body of literature regarding attrition. Four of the most recent and comprehensive reviews have been carried out by Tinto (1975), Pantages and Creedon (1978), Lenning, Beal, and Sauer (1980), and Bean and Metzner (1985). The first three reviews focus on younger full-time students at residential campuses. The latter review by Bean and Metzner looks at older, part-time and commuter students. All are extremely useful in providing theoretical frameworks, criticism of research methodologies, summaries of the major findings and conclusions about them, as well as suggestions for improving retention.

Research and writing about attrition of adult part-time students, particularly those studying at a distance, is a relatively recent phenomenon. One of the reasons for this is that high attrition has been both expected and accepted as a characteristic of distance study. As Daniel and Marquis (1979) noted, "... when correspondence schools began, the idea of survival of the fittest was more acceptable than it is today..." However, more traditional publicly funded educational institutions, such as universities, have now

entered the field of distance education. These institutions have a vested interest in student retention, and have directed resources toward studying and solving the drop-out problem. Retention of students has become one of the leading issues for distance education practitioners, and a number of studies have been carried out over the past few years.

Problems with Defining Attrition and Retention

The main body of research and literature regarding drop-out refers to dropping out of a program of studies (eg. one year certificate, two year diploma, four year degree). Definitions of retention most often refer to completing these programs in the prescribed amount of time (Lenning et al., 1980). This definition is obviously inappropriate for any student who is not studying full-time in a program. A new term 'stopping out' is used to describe the behaviour of a temporary drop out who completes a program in longer than the prescribed time. A few studies have shown that this behaviour is more common among full-time students than previously thought, and can sometimes increase the chances of eventual graduation (Lenning et al., 1980).

With the increasing numbers of part-time adult students, it is necessary to develop new definitions of retention and attrition. Bean and Metzner (1985), in an attempt to provide a definition for "drop-out" appropriate to adult

students, described it as someone "who enrolls at an institution one semester but does not enroll the next semester and has not completed his or her formally declared program of study." (p. 489). They acknowledged that stop-outs would not be differentiated from drop-outs using this definition. Lenning et al., (1980) proposed that a generic definition of retention was "success in achieving some goal or objective". This definition, while it more clearly explains what attrition is, is not very useful for research purposes. Obviously, goals and objectives of students will differ by institution, and by individual. Some institutions have developed their own definition of attrition and retention based on institutional and student characteristics.

A study by Shale (1982) of attrition at Athabasca University (AU) was successful in clearly defining 'drop-out' at that institution. Shale used attrition and completion to describe the behaviour of a student in a single course and defined drop-out as a student "who enroled in an AU course but did not successfully complete the entire course (or portion contracted for)". (p. 114). He observed that definitions of dropping out of programs were largely inappropriate for Athabasca University students since completion of a full degree program was seldom cited by AU students as their goal upon entry. In a more recent study of attrition at Athabasca University (AU Trends, #2, 1985) the author cautioned against presupposing "that all AU students

enrol in AU courses with the aim of gaining credits". (p. 1). He went on to suggest that even though students might show up on the university records as having withdrawn from a course, they might have very well met their own goals.

Clearly, caution must be exercised in defining drop-out for research studies. If the purpose of the research is to improve retention, institutions are perhaps best to define attrition and retention according to their own student populations, taking into consideration students' motives for study and their usual patterns of behaviour in moving through courses and/or programs. At the same time, it should be noted that usefulness to other researchers and educators is an important consideration in developing a definition. Pantages and Creedon (1978) pointed out some of the difficulties in defining attrition and retention, and stated that "combining the findings from separate studies depends, in part, on how attrition was operationally defined in those studies". (p. 51).

Student Characteristics Related to Attrition

Demographic characteristics, scholastics records and aptitudes, personality and motivational factors, and financial situations of students have all been examined to find predictor variables for student success. Some direct relationships have been found, but must be used with caution. Conflicting reports are common. For example, while several

studies reviewed by Pantages and Creedon (1978) showed that older freshman were less likely that their younger counterparts to complete a full-time four year degree program, studies of single course completions at Athabasca University (AU Trends, #2, 1985) showed a strong trend in the opposite direction. This kind of difference in results of studies of student characteristics as predictor variables for success points out the fallability of single variable correlates of drop-out, and the importance of taking contextual variables into consideration.

Another caution in looking at studies of the relationship between student characteristics and attrition is that many of the studies have focused only on descriptions of characteristics of one group, drop-outs or persisters, with no comparison group (Pantages and Creedon, 1978). Recent findings show that there may be considerable similarity between the two groups. A study of attrition in the Regents External Degree Program (Taylor, 1983) which compared characteristics of inactive students to active and graduate students found that with the exception of gender, the groups did not vary greatly.

Demographic Factors

Both the Lenning et al. (1980), and Pantages and Creedon (1978) reviews concluded that there was enough conflicting data to say that generally speaking, age was not a

primary factor in attrition. The same reviews turned up similar findings for sex. Again, there may be differences between the sexes depending upon context, and there is some evidence that the reasons men and women give for dropping out may be different, but sex is not considered a significant variable except as other factors are taken into consideration.

The same results do not appear to be true for distance education students. In recent studies completed at Athabasca University (AU Trends, #2, 1985), there was a definite correlation between age of student and success rates. Just over one-third of students under the age of 25 successfully completed their courses while over one-half of those 35 and over successfully completed theirs. Sex was also found to be a predictor variable. About 50% of women completed, compared with 38% of men. Woodley and Parlett (1983) produced similar findings. Men dropped out of Open University courses more frequently than women, and students over the age of 30 had better success rates than younger students. Bartels (1982) also found at the FernUniversitat in Germany that drop-out was highest among distance education students under the age of 25. On the other hand, he reported that women students discontinued their studies more frequently than men in that institution.

Socioeconomic status was recognized by both the Pantages and Creedon (1978) and Lenning et al. (1980) reviews

as a factor commonly believed to have a relation to attrition. They also agreed that research results were not conclusive. Socioeconomic status is based on and related to so many other factors, it is difficult to isolate as a variable. Tinto (1975), in his review of the literature, concluded that there was an inverse relationship between family socioeconomic status and drop-out, but that socioeconomic status had many associated factors which might partially or wholly account for this. For example, Hackman and Dysinger (cited in Tinto, 1975) had shown that the family's expectations for achievement emerged as being just as important as the student's expectations in influencing persistence. Lenning et al. (1980) stated that "the best conclusion may be that students of distinctly disadvantaged status are more prone to attrition but the operating variables may be level of familial aspiration, educational level of parents, personal educational aspirations, and involvement with the college". (p. 116).

In a study of distance education students at the Open University in Britain, Woodley and Parlett (1983) found that there were particularly high drop-out rates among new students by those in manual occupations, the retired, and the unemployed, and those in institutions such as prisons and hospitals. This pattern, although less marked, was the same for continuing students. Woodley and Parlett did not speculate about factors associated with occupation, but

rather took the findings at face value along with a number of other characteristics, and concluded that it is possible to identify 'high risk' students upon entry. It appears from some of the differences in conclusions among institutions, about who is 'at risk', that the identification is best done on an institutional basis.

Academic Factors

Scholastic measures of all kinds, secondary school standings, academic aptitude, previous academic background, and level achieved, have all been studied as correlates of persistence in post-secondary studies. Pantages and Creedon (1978) stated that while such measures had been found to be the most significant and consistent predictors of attrition, they still only accounted for a small proportion of total drop-outs. They went on to say that scholastic aptitude measures were better predictors of achievement than persistence. Tinto (1975) also acknowledged that most studies had shown a direct positive correlation between past performance and achievement in post-secondary studies, but noted that achievement was not the same as persistence. He speculated that a student's perception of his or her own ability based on past experience could influence expectations for college education, and consequently commitment to the goal of completion. Lenning et al. (1980) noted that, although most studies showed a significant, positive relationship between persistence and entrance examination scores,

students who dropped out voluntarily also typically had scores which predicted success in college. A major review of student attrition at federal service academies in the United States (Department of Defense, Commerce, and Transportation, 1976) concluded similarly that while combining measures of specific abilities into an overall measure of ability provided the best predictor of who would leave their studies, none of these characteristics had been found to be related to voluntary resignation due to lack of motivation.

A number of studies of adult distance learners have shown that, generally, the lower a person's previous educational qualifications, the more likely he or she is to drop-out (Woodley and Parlett, 1983; AU Trends, #2, 1985; Bartels, 1982). Kennedy and Powell (1976) used results of a study done at the Open University in Britain to show that "lack of academic preparedness does seem to be a major factor in many cases in increasing the pressures upon a students' time and energy". They pointed out that "... while the majority of students possessing lower qualifications do not drop-out expressly for academic reasons, relatively more of them do so than their better qualified counterparts". (p. 69).

Another important academic factor related to persistence is study habits. These may or may not be tied to previous level of education achieved. However, it is likely that if an individual has already successfully achieved

progressively high levels of education, that he or she has developed study habits which are beneficial. Pantages and Creedon (1978) pointed to study habits as one of the obvious factors affecting persistence. They cited research reports which measured the amount of time spent on studies, and in which students rated their own study habits. In all cases, good study habits and/or greater numbers of study hours positively correlated with persistence. Lenning et al. (1980) reported identical conclusions in their review. Bartels (1982) found the same positive correlation between time spent studying and persistence for distance education students at the FernUniversitat. As well, quite a number of studies have shown that there is a direct relationship between getting started on a homestudy course immediately and completion of the course (see, for example, DiSilvestro and Markowitz, 1982). There appears to be no question that study habits have a direct impact on persistence for all students.

Motivational Factors

Pantages and Creedon (1978) identified a number of motivational factors which have been studied in relation to college persistence. These include motivational level and commitment, reasons for attending, occupational goals, educational interest, and family and peer group influence. They noted that these factors were among the most common reasons given by students for taking a decision to drop-out,

but went on to say that although studies had shown a relation between motivational factors and attrition, no one had yet determined which, if any, of the factors were predictive or how they could be measured. Pantages and Creedon concluded that it just might be that motivational factors were far less important in determining persistence than had been assumed. Boshier (1978) similarly found that the relationship between motives for participation in and drop-out from adult education was slight and generally insignificant. He cautioned the use of single variable explanations of drop-out for predictive purposes.

From their reviews, Lenning et al. (1980) reported evidence contradicting Pantages and Creedon. Positive correlations were found between persistence and three motivational factors: level of degree aspiration, commitment, and peer group influence. However, Tinto (1978) came to conclusions similar to Pantages and Creedon in his review. Both Pantages and Creedon (1978) and Lenning et al. (1980) reported a positive relationship between an expectation to drop-out at entry and actual attrition. It may be concluded that although motivational factors are difficult to isolate and measure, and have limited usefulness as single variable predictors, there appears to be a relationship between these factors and attrition which may become important in the context of other difficulties with study.

Personality Factors

Pantages and Creedon (1978) suggested, after reviewing a number of studies which reported nonsignificant findings, that personality factors were not important in persistence and attrition. They pointed to evidence that researchers had not distinguished between types of drop-outs, and that negative traits generally ascribed drop-outs were more those of students who had been required to withdraw than those of students who had withdrawn voluntarily. Pantages and Creedon also pointed out the weakness of the measurement instruments available, and the inability of tests "to isolate major psychological characteristics that will be useful for prediction of persistence or withdrawal". (p. 74). They concluded that even if there were not measurement problems, that there very well might not be a significant relationship between personality factors and attrition. Tinto (1975), also concluded that the important distinction between voluntary withdrawals and academic dismissals must be made, and that, in many respects, the personality characteristics of voluntary leavers were similar to those of persisters. He did point out that voluntary withdrawals tended to manifest greater oversensitivity and egotism than any other group, and speculated that this could affect successful social integration at their post-secondary institution.

Lenning et al. (1980) disagreed somewhat with Pantages and Creedon's conclusions about personality factors and attrition. They stated that the shortcomings of measurement instruments did not make personality factors any less important in relation to attrition and persistence. To support their conclusions, they pointed to Holland's work in the area of personality type and environmental fit, and its application to attrition.

There is truth in both arguments. While Pantages and Creedon were probably correct in saying that personality characteristics are of limited value as single variable predictors, Lenning et al. were equally correct in concluding that, when personality factors were studied in relation to institutional fit, they became quite important factors in persistence. A study of drop-out from military academies (Department of Defense, Commerce, and Transportation, 1976) found precisely this kind of personality/institutional fit relationship. For example, those students with a higher need for deference and authority were more likely to persist in military academies than those students with a high need for autonomy. Kennedy and Powell (1976), in their study of drop-outs at the Open University in Britain, also maintained that personality characteristics were important, but only in context of circumstances. They proposed a two-dimensional model to look at how students with "strong" and "weak" characteristics might react to varying circumstances.

Summary: Student Characteristics

There is strong evidence to suggest that institutions can identify high risk students, that there are some reliable predictor variables for persistence. It is equally evident that these are contextual. In other words, a student who may persist in one institution may not do so in another. By studying characteristics of their persisters and drop-outs, a particular institution may well be able to discover institutional factors which are helping or hindering their students. Care must be taken to distinguish between voluntary withdrawals and forced withdrawals, and between temporary and permanent withdrawals.

Institutional Characteristics Related to Attrition

As each student has individual characteristics which are important in the attrition/persistence equation, so does each institution. Pantages and Creedon (1978) noted that this had been recognized only since about 1960. Before that, the institutional environment or culture was never considered a variable. They pointed out that institutions not only attempt to affect change in a particular direction in the student, but they also begin by attracting or recruiting a particular kind of student, thereby influencing the attrition rate from the beginning. For example, an open distance education university which attracts the part-time adult student who has been away from studies for quite a

number of years, has rusty study skills, no post-secondary experience, a full-time job and a family, is probably starting with a student population which many institutions would call 'high risk'.

There are a number of institutional characteristics which have been found to have some relationship to attrition. Most recent attrition research favors interactional models which examine how the student, institution, and environmental factors come together to produce a particular result. A number of studies cited by Pantages and Creedon (1978) and Lenning et al. (1980) support the 'institutional fit' theory. These looked at the match between student needs and personality, and at institutional ability to meet the student's needs and to present an image suitable to the student's personality. Institutional characteristics were also an important factor in Tinto's (1975) theory of student attrition. He began with Durkheim's theory of suicide to develop a theory of drop-out which viewed an individual's interactions with both academic and social systems of an institution as determinants of personal goal commitments as well as commitments to the educational institution. The individual's experiences in the system "continually modify his or her goal and institutional commitments in ways which lead to persistence and/or to varying forms of drop-out". (p. 94). Spady (1971) also proposed a model of drop-out which emphasized institutional characteristics. He sup-

ported earlier research which spoke of an "environmental press", referring to the demands which an institution places upon a student. In Spady's view, "full integration into the common life of the college depends on successfully meeting the demands of both its social and academic systems". (p. 39). Tinto's and Spady's theories will be discussed further under the section on "Theoretical Models of Attrition".

In a comparison study of distance education institutions in Germany and Sweden, Bartels and Willen (1985) pointed out how the prevailing attitudes within an institution toward such issues as attrition had an impact on how the institution measures and dealt with the problem, and could partially account for "divergent drop-out statistics". Some of the institutional characteristics which have been studied are reviewed below.

Size/Image/Status

Pantages and Creedon (1978) reported that there was some evidence to suggest that smaller institutions had lower overall attrition rates. This supports the notion that frequent contact with faculty and fellow students promotes persistence. Pantages and Creedon concluded, as did Tinto (1975), that size was related to attrition but "in a manner yet unclear". (p. 115). Lenning et al. (1980) reported high retention rates at more prestigious institutions with a high cost of attending, and speculated that this might be

due to perceived benefits on the part of the student, and the type of student admitted. They also reported research which showed greater persistence at privately funded institutions, those with religious affiliations, and those with a clearly defined mission statement which was communicated to students and other constituents.

Housing

Pantages and Creedon (1978) and Lenning et al. (1980) both reported that it had been shown consistently that students who lived on campus were much more likely to persist in their studies. Pantages and Creedon speculated that living in student residences might facilitate social integration into campus life and promote feelings of satisfaction with the institution.

Student-Faculty Interaction

According to Pantages and Creedon (1978), "the quality of the relationship between a student and his or her professors is of crucial importance in determining satisfaction with the institution". (p. 79). Lenning et al. (1980) reported that their review supported this statement. Tinto (1975) stressed the importance of student interaction with faculty to both social and academic integration of the student and the consequent enhancement of institutional commitment. He called faculty interaction an important "social reward" for the student. Pascarella and Terenzini (1979b)

found that when they controlled for other variables, student/faculty contact still had significant correlation with students' decisions to withdraw or persist. In this study, Pascarella and Terenzini focussed on informal contact outside of the classroom. They found that there were male/female differences in response to the content of informal discussions, but the effect for both sexes was greatest when discussions focussed on intellectual or course related matters.

A number of studies of distance education students have pointed to the importance of tutor interaction as a factor in persistence (Flinck, 1978; Rekkedal, 1981; Woodley and Parlett, 1983; Kennedy and Powell, 1976; Sweet, 1982; Phythian and Clements, 1982). Sweet (1982) investigated the personal contacts which students had with their tutors through the telephone tutoring system at the Open Learning Institute in British Columbia. He found a similar pattern and frequency of student-initiated calls from both completers and non-completers, and also found that both groups consistently gave positive ratings to their tutors. Sweet concluded "... that tutors have been successful in creating a climate of supportiveness for their students -- both completers and non-completers". (p. 8). He pointed out that telephone tutors in distance education institutions are ideally situated to provide the kind of feedback to students which Pascarella and Terenzini (1979b) found contributed

most to persistence, that is, contacts focusing on intellectual or course related materials. Since in the distance learning situation, instruction is embodied in the printed package, tutors can spend more time than their classroom counterparts on providing personal feedback to each student about his or her academic progress. The tutor also plays a central role at Athabasca University. The results of individual learner tracking as part of the REDEAL project showed a relationship between learner motivation and frequent contact with tutors (Coldeway, MacRury, and Spencer, 1980).

There is no doubt that student/faculty interaction is an important factor in persistence and attrition. It is equally obvious that not all interaction is perceived as positive. As Sweet (1982) stated "... effectiveness of these exchanges as instructional feedback is enhanced to the extent that instructors are responsive and supportive in their interactions with students". (p. 8). Rekkedal (1981) also recognized the need for the tutor to have a broader role in providing "counselling" as well as academic support to the student. He proposed to combine these roles, and introduce a "personal tutor/counsellor" into the distance education system.

Student Support Services

Although "... the majority of the recommendations for reducing attrition have been concerned with enlarging

the role and scope of counselling services for students ..." (Pantages and Creedon, 1978, p. 89), relatively little evaluative research has been done to find out what the effects of student services are on persistence and attrition. Pantages and Creedon (1978) reported that studies which have been conducted on the impact of counselling programs show that there was a significant result in reducing attrition rates for those students who had some contact with the services. Lenning et al. (1980) also found that counselling services could increase persistence. However, they noted that research also showed that many students did not use counselling and other student services, and that a number of studies had recommended better publicity and communication. They also commented on the efficacy of academic advising, orientation programs, and learning assistance programs in reducing attrition.

Not enough research exists to reach any conclusions about other services such as career planning and placements, foreign student programs, financial aid advising, and disabled student services. In distance education, where student services such as advising, counselling, and student advocacy "are only beginning to be seen as an important part of learners educational experience" (McKinnis-Rankin and Brindley, 1986, p. 60), there has been almost no research on the impact of student support services outside of those offered by tutors and other academics. Both Rekkedal

(1981), and Daniel and Marquis (1979) noted that very few distance education institutions had employed professional counsellors or formalized the counselling function.

Other Institutional Factors in Distance Education

A number of other factors which contribute to attrition, and are particular to distance education were identified by Woodley and Parlett (1983). These included badly designed course packages (boring, unclear, heavy workload for number of credits, level of difficulty inappropriate), courses where content did not live up to expectations created by the course description, mandatory television and radio broadcasts which caused accessibility difficulties, and slow turn-around-time on the marking of assignments. Holmberg (1982) also reported specifically on the correlation between turn-around-time and course completion, and Bartels (1982) commented on the tendency for course authors to write using their colleagues at other universities rather than students as their target group.

Peer Group Influence

The literature suggests a strong correlation between peer group influence and attrition for the 18-24 year old traditional student. Tinto (1975) concluded that, even if the person/institution fit was not ideal, social integration leading to persistence could still be attained through sufficient friendship support from others with like values.

Pantages and Creedon (1978) discussed the important role which a peer group played in developing attitudes associated with persistence. Lenning et al. (1980) also concluded that peer group influence was strongly related to persistence, particularly in the development of educational values.

For the adult part-time student, peer group influence is also important (Bean and Metzner, 1985), but the peer group is often not associated with the educational institution. This is particularly the case for distance education students. For this reason, peer influence will be addressed further in the following sections on "External Environmental Factors Related to Attrition" and "Reasons for Drop-Out Provided by Students."

External Environmental Factors Related to Attrition

Environmental factors have not been cited as major variables influencing attrition for younger students engaged in full-time study. Lenning et al. (1980) mentioned only three external variables in their review: economic cycles, military draft, and social forces. On the other hand, Bean and Metzner (1985) emphasized the impact of factors in the external environment on the attrition rates of older part-time students, and developed a conceptual model to reflect this emphasis. They included such factors as finances, hours of employment, outside encouragement, family responsibilities, and opportunity to transfer to other institutions.

Rekkedal (1981) concluded that the most common reasons for students dropping distance study were not inherent in the study method, but rather concerned the same difficulties which all adult part-time students face, namely competing demands for their time and energy, and unforeseen changes in their circumstances. Woodley and Parlett (1983) reported similar findings. It should be noted that both of these studies relied on reports from drop-outs, and that many researchers believe reasons for drop-out provided by students tend to be rationalizations or oversimplifications of a complex process (Phythian and Clements, 1982; Kennedy and Powell, 1976).

The following are the factors associated with the environment outside of the educational institution which are mostly commonly associated with attrition.

Financial Factors

Lenning et al. (1980) noted that lack of finances is often given as a reason for dropping out. They pointed out that studies with younger full-time students have shown a positive correlation between the extent to which the student perceives a problem (regardless of the actual situation), and attrition. They reported that the amount and type of financial aid was also related to persistence, and surprisingly, that part-time employment had a positive correlation with persistence.

Beal and Metzner (1985) noted in their review concerning older part-time students that adult students reported concern over finances as often as younger students, and that part-time students mentioned financial difficulty as frequently as full-time students as a reason for withdrawal from studies. They also reported that full-time employment or employment in excess of 20-25 hours per week was negatively related to persistence and that more older students than younger students fell into this employment category. Both Rekkedal (1981) and Woodley and Parlett (1983) cited lack of finances and demands of employment as important factors in drop-out from distance education studies.

Outside Encouragement

External support and encouragement to study provided by friends, family, and employers is thought to be one of the critical factors in persistence for the adult part-time student since their reference group tends to be off campus rather than on (Bean and Metzner, 1985) However, not enough research exists as yet to make the kind of definitive statements which are possible about younger students and the positive impact of parental encouragement on their attrition rates.

Distance education students have consistently reported lack of encouragement from family, particularly a

spouse, and/or lack of support from employer as reasons for dropping studies (Woodley and Parlett, 1983; van Wijk, 1983; Bartels, 1982). Encouragement, in such cases, may mean more than psychological support. Pragmatic forms of support such as a spouse taking over household duties, or an employer reimbursing the cost of course or giving time off for examinations are reported by distance education students as being important to persistence.

Change in Circumstances

Change in circumstances is rarely, if ever, mentioned in the literature regarding drop-out by younger full-time students, but is consistently mentioned with regard to adult part-time students. The role of student is often a minor one for the adult learner. Study commitment must compete with demands from family, work, friends, and community, and often studies get set aside if there is a change in circumstances which upsets the balance. Woodley and Parlett (1983) list illness of a relative, change in marital status, giving birth, moving house, change in work hours or workload, and changing or starting employment as some of the factors which can influence persistence in a negative way. This is discussed further in the following section, "Reasons for Drop-Out Provided by Students".

Reasons for Drop-Out Provided by Students

Although there is a great deal of literature in which students describe their reasons for dropping out, there is some debate about the relative significance of the information. The most common criticism is that reasons for withdrawal provided by students are probably rationalizations, given that there are negative connotations associated with drop-out (Kennedy and Powell, 1976), and that reasons are usually given in retrospect, not at the time of the decision to drop. Another criticism is that unidimensional reasons tend to over-simplify what is probably a very complex interplay of variables as already described in this chapter. As well, it has been suggested that students may not totally understand their own motivations (Lenning et al., 1980). Notwithstanding these cautions, the reasons for withdrawal provided by students have to be considered an important piece of the attrition puzzle. As Lenning et al. pointed out, the reasons given by students were part of the development of their personal drop-out rationales, and as such, institutions could learn from them. The same rationale may be operating for other students who may become drop-outs given a particular set of circumstance. For example, Woodley and Parlett (1983) quoted from a student at the Open University, "Work pressures meant that I had less time for Open University study -- but I guess that I would still have stuck with the course if I had found it more interest-

ing". (p. 8). The reasons for drop-out cited by students have been given with such consistency that broad classifications have been developed. However, as Pantages and Creedon (1978) noted, these are of varying importance depending on student and institutional characteristics. The most common of the standard categories of reasons which students provide for dropping out follow.

Academic Reasons/Dissatisfaction with Institution

The most frequently stated reasons for drop-out among young full-time students have to do with academic concerns: dissatisfaction with matters such as course availability, curriculum, scheduling, grades, and degree regulations (Lenning et al., 1980). In two studies of drop-outs from distance education courses cited by Woodley and Parlett (1983), less than 30% of students referred to study problems caused by the form and content of the courses. In fact, there is much evidence to show that adult students, rather than holding the institution accountable in any way, often blame themselves for non-completion (Bartels, 1982). This can be particularly true for distance educations students who do not usually know fellow students with whom they can compare experiences.

Financial Reasons

Financial reasons for dropping out are cited almost as often as academic reasons by young full-time students.

There is some evidence to suggest that perceived financial difficulty is more important in influencing a decision to drop-out than whether real financial difficulty does exist (Tinto, 1975; Pantages and Creedon, 1978). Woodley and Parlett (1983) noted lack of financial support as a reason given by drop-outs from distance education courses, but the frequency of such reports was not given. Rekkedal (1981) listed "economic reasons" as one of the most frequently cited reasons for discontinuation of correspondence studies at NKI-skolen in Norway. Bean and Metzner (1985) noted that older part-time students reported financial concerns as often as their younger full-time counterparts in giving reasons for withdrawal from college.

Motivational Reasons

Pantages and Creedon (1978) categorized a variety of student-provided reasons for drop-out under 'motivational factors'. These included uncertainty about goals, lack of interest in studies, and inability or unwillingness to study. Bean and Metzner (1985) reported that older part-time students often studied for pragmatic career-related reasons, and speculated that for these students, perceived usefulness of studies was an important factor in persistence. Reasons given for drop-out by adult distance education students reported by Rekkedal (1981) and Woodley and Parlett (1983) support this speculation. They cited student reasons such as career goal changes, goal achievement

through different means, and studies not suited to goal.

In a study of students at the FernUniversitat, Bartels (1982) reported that students cited one of the most important factors in persistence as having the ability to choose a major subject according to interest. Bean and Metzner (1985) classified interest or lack of it under the broad general heading of "satisfaction". They defined this category of reasons as the extent to which students enjoyed the role of student, and their level of interest or boredom. They reported that role satisfaction and interest were probably more important factors in persistence for older part-time students than younger full-time students. They noted that if satisfaction level was high, the competing demands for the older students' time might not have had such a negative effect on persistence.

Change in Circumstances

This topic has already been covered under "External Environmental Factors Related to Attrition", but deserves some mention here as one of the most consistently cited reasons given for withdrawal by adult part-time students (Bean and Metzner, 1985). Adult students balance their studies with many other commitments, and a change in circumstances such as family illness or death, change in employment conditions, household move, or change in marital status can result in withdrawal given certain other conditions. In

studies of drop-out from distance education courses, change in circumstances is usually the reason cited most often by adult students (Kennedy and Powell, 1976; Bartels, 1982; Pythian and Clements, 1982; Rekkedal, 1981; van Wijk, 1983; Woodley and Parlett, 1983).

Theoretical Models of Attrition

By far the largest portion of drop-out research consists solely of descriptions of causal factors attained through empirical research. However, there is now general agreement that what is needed are conceptual models of attrition which recognize the complex interplay of variables which interact over a period of time to produce drop-out. These models lend themselves to multivariate and longitudinal path analyses which are required in order to isolate and measure the relative importance of various factors during the drop-out process. A few conceptual models have been introduced in the attrition literature. Some of these are narrow, taking only one or a few factors into consideration. Others are much wider, encompassing the interaction of student, institutional and environmental factors. The latter tend to be more useful for research purposes and for planning retention strategies.

Spady (1971) is usually credited with introducing the first model of attrition. He used Durkheim's theory of suicide as an analogy for drop-out. His model described the

assimilation process of a student into an educational institution, taking into account student characteristics and the institution's social and academic demands. Spady's theory was that if the student could meet the demands of the institution and felt rewarded in the process, it was likely that successful assimilation and persistence would be the result.

Tinto (1975) developed a theory similar to Spady's but went beyond description of the process to build a predictive model. Tinto viewed the educational institution as a social system into which the persisting student became integrated over time. He described the integration process as a series of interactions between the person and the social and academic systems of the institution. The person entered with certain completion goals and institutional commitments which, over time, were modified by the quality and frequency of social and academic interactions. Depending upon whether the students' goals and commitments were strengthened or weakened by this process, they would drop out or persist.

A number of studies have tested the Spady and Tinto models. The best known of these are the validation studies of Pascarella and Terenzini. They have found support for the Tinto theory in a variety of ways. In a study of freshman year students at one college, they were able to show, to some degree, that student characteristics and academic experiences interacted to produce persistence or drop-out

decisions (Terenzini and Pascarella, 1978; Pascarella and Terenzini, 1979a). In another study, they were able to isolate student-faculty contact as a variable and showed how this contributed to both social and academic integration of the student according to the Tinto model (Pascarella and Terenzini, 1979b). Another of their studies looked at the construct validity of Tinto's conceptual framework (Terenzini and Pascarella, 1980) and found support for it. Although they felt that Tinto overstated the importance of student characteristics, they found that the model's two major constructs, social and academic integration, were significant in distinguishing between persisters and voluntary leavers. Pascarella and Terenzini (1980) also found support for the predictive validity of social and academic integration for attrition and completion by developing and testing a multidimensional measurement instrument to assess the major dimensions of the Tinto model. They concluded that the model was useful for theoretical and research purposes, as well as for practical purposes of planning retention strategies.

Adult part-time students do not fit the Tinto model because they have much less interaction with faculty and fellow students than younger part-time students who spend much more time on campus. Hence, social integration as defined by Tinto does not contribute in the same way to their goals and institutional commitment. The significant

others in adult students' lives are usually the same ones they had before commencing their studies -- family, friends, employer and co-workers. This is particularly applicable to distance education students who study in their own homes and have even less contact with faculty and other students than do campus-based part-time learners. Bean and Metzner (1985) developed a conceptual model of the attrition process for adult part-time students. They proposed that withdrawal decisions were based on four sets of variables: 1) background and defining variables of the student such as age, enrolment status, and gender; 2) academic variables such as study habits and course availability; 3) environmental variables such as finances, hours of employment, outside encouragement, and family responsibility; 4) psychological outcomes such as perceived utility (of studies), satisfaction, goal commitment and stress. These sets of variables can contribute directly, indirectly or can interact to contribute to the drop-out decision.

Bean and Metzner (1985) proposed that there were "compensatory interaction effects" (p. 49) in the model as follows.

> When academic and environmental variables are both... favorable to persistence, students should remain in school, and when both are poor, students should leave school. When academic variables are good, but environmental variables are poor, students should leave school, and the positive effects of the academic variables on retention will not be seen.

> When environmental support is good and academic support is poor, students would be expected to remain enrolled -- the environmental support compensates for low scores on the academic variables. (pp. 491-2)

Bean and Metzner described a similar relationship among academic outcomes, marks and psychological outcomes. They suggested that the older student might persist despite low marks if the psychological outcomes were positive (for example, seeing the usefulness of their studies). The compensatory effects between variables in the Bean and Metzner model are similar to those between social and academic integration identified by Tinto (1975) in his model of attrition. What is very clear is that the relative importance of variables in an interactional model of attrition is entirely dependent on the particular student population and what they perceive and experience as being important to their persistence. For example, using the Bean and Metzner model, if adult distance learners see their studies as being useful, have family support and academic capability, they will probably persist despite isolation from the institution. On the other hand, they probably will not persist if, in addition to being isolated, any of the first three conditions is not met. Hence, the Bean and Metzner model may prove to be a useful starting point in developing a model of attrition and retention strategies for adult distance learners. What is needed is more information about what these particular students see as contributing to their persistence or withdrawal.

Other models of attrition described by Lenning et al. (1980) are discussed briefly here. These are not widely recognized in the literature and appear not to have been tested to the extent of the Spady and Tinto models.

In 1973, Flannery described a theory of attrition which considered student expectations and attainment. In this model, students were seen to enter post-secondary study with certain expectations and, depending upon mitigating circumstances from three sources -- the student, society and the institution -- their expectations might or might not be met. If their expectations were met, persistence was likely. Alfred (1974) applied symbolic interaction theory to attrition in developing a complex model in which he identified 52 primary factors involved in withdrawal decisions.

As well as describing models of attrition, Lenning et al. (1980) suggested two other well validated psychological theories of behaviour which might be applied to attrition. They proposed that Holland's (1966,1973) theory of vocational choice, which described six basic personality and environmental types and his measurement instrument, could be used to test a person/institutional fit theory of persistence. Finally, Lenning et al. discussed the applicability of Festinger's (1962) theory of cognitive dissonance to a person-environment model of attrition. This theory dealt with the individual's perceptions and knowledge of self, the social environment and his or her experiences. If there was

a perceived dissonance among the elements, the individual would seek to lessen it. In applying the theory to attrition, Lenning et al. suggested that students experiencing dissonance between their perceived needs and the institution's ability to meet them would be likely to remedy the situation by dropping out. Each situation would differ depending upon the nature of the individual and the institution.

There have been some attempts by researchers to develop a theory of attrition and a retention strategy based on an isolated variable. Two such models which apply specifically to distance education are reported here. Thompson (1984) proposed an attrition theory of cognitive style/institutional fit. Specifically, he suggested that field-dependent learners, because of their greater need for structure and support, were not well suited to the independent study required of distance learners. Thompson recommended that field-dependent distance learners might benefit from increased opportunity for contact with academic staff and other students. Field-independent learners, because of their tendency to be more autonomous, should be ideally suited to distance education. Thompson concluded that drop-out should be investigated using models which reflected "aptitude-treatment interactions" proposed by Cronbach and Snow (Thompson, 1984, p. 291).

DiSilvestro and Markowitz (1982) used the expectancy theory of motivation to propose the use of behavioral contracts to improve completion rates in correspondence study. Their idea was that, if the goal and path to the goal were clear to the student, then successful completion would be the likely outcome. They concluded from the test study of their theory that the contract students were much more likely to have a prompt start but were no more likely to complete than their counterparts with no contracts. This result speaks to the inadequacy of single-factor theories and strategies in dealing with a complex issue such as attrition.

Retention Strategies

A number of research studies and reviews of the literature have proposed retention strategies. The following is a summary of these based on authors reviewed for this chapter.

Recruitment/Information

Recruitment programs should provide accurate information about courses, programs and institutions to help prospective students to make sound decisions and choices. Zahn (cited by Rekkedal, 1981) pointed out the dangers in over advertising or advertising in a misleading way, "attracting thereby students who are unable to profit from

the instruction or students who are seeking knowledge the course is not intended to provide". (p. 16).

Admissions Policies

Although some researchers have recommended raising admissions standards as a method of lowering attrition, most authors agreed that this was not an acceptable solution. Rekkedal (1981) pointed out quite accurately that, in the long run, this only lessens accessibility and widens the existing educational gaps within society.

Orientation Programs

More comprehensive, thorough orientation programs have been recommended fairly consistently in the literature (Pantages and Creedon, 1978; Lenning et al., 1980). The stated purpose of these is to help integrate students into the institutional environment.

Assessment and Counselling

Recommendations for assessment and counselling services include pre-enrolment counselling and academic advising, identifying 'high risk' students, career counselling, study skills assistance, remediation services, and exit interviews. (Rounds, 1984; Pantages and Creedon, 1978; Lenning et al., 1980; Woodley and Parlett, 1983).

Student/Faculty Interactions

Better training programs for faculty and tutors which incorporate counselling skills were suggested by a number of authors (Rounds, 1984; Rekkedal, 1981; Sweet, 1982). Another frequently made recommendation was to increase the opportunity for faculty/student interaction outside of the classroom (Lenning et al., 1980).

Summary: Retention Strategies

The most frequently made suggestions with regard to retention have to do with support services. Unfortunately, very little in the way of evaluative research is available to attest to the effectiveness of these programs in lowering attrition. What may be concluded is that different models of attrition are required for different types of student bodies and institutions, and, hence, no one set of retention strategies will fit all situations.

Research Method

The research method used for this study was chosen because it is a technique designed to illicit peoples' experiences which significantly contribute to a specified outcome. The Critical Incident Technique (Flanagan, 1954) was originally developed to identify characteristics of pilot performance through direct observation of behaviour. During the 1950's, it was employed for a number of personnel

studies to do with performance evaluation, but was not used frequently for a number of years after that era. Recently, its effectiveness as a research method in counselling has been discovered, and a number of studies have employed it (Woolsey, 1986).

As a qualitative method of inquiry, the critical incident technique values the individual's description of his or her subjective reality. This does not render the data any less reliable or valid than that collected through quantitative methods. Andersson and Nilsson (1964), in an extensive review, concluded that the critical incident technique was both reliable and valid as a method of collecting information. They stated: "The material collected seems to represent very well the behaviour units that the method may be expected to provide." (p. 402).

The strong criticisms of attrition research are that it is lacking in theoretical conceptual models and that it is largely descriptive or correlational with the emphasis on identifying relationships between student and institutional characteristics and drop-out (Tinto, 1975; Lenning et al., 1980; Bean and Metzner, 1985). At the same time, a number of researchers (Terenzini and Pascarella, 1980; Rounds, 1984; Bartels, 198_; Kennedy and Powell, 1976) have stated the greater importance of student experiences in relation to their background characteristics, and the need to explore these experiences further in defining significant factors in

developing models of attrition for distance education.

Woolsey (1986) discussed the usefulness of the critical incident technique to foundational and exploratory work, noting that "Critical incident studies are particularly useful because they generate both exploratory information and theory or model building." (p. 252). By using an exploratory technique which facilitates gathering direct observations from students, the incidents which are critical to persistence of a particular student population can be identified. The factors which emerge can then be used to develop a model of attrition and retention strategies for that population which can be tested and evaluated.

CHAPTER III

METHODOLOGY

Subject Selection

Forty students enrolled in their first course at Athabasca University were chosen at random from eight courses, (five students from each course). The eight courses were selected from both liberal and applied studies after discussions with academic staff at the institution. The courses selected provide a good representation from a variety of disciplines, and included both three-credit (half year) and six-credit (full year) courses. It would have been desirable to include more senior level courses but student numbers were not large enough in a given month to draw a sample (Athabasca University has continuous enrolment. Students with the same start date were chosen from each course). The courses chosen were as follows:

French 103: Ensemble: French for Beginners (6 credits)
English 210: Literary Forms and Techniques (6 credits)
Psychology 206: Introductory Psychology (6 credits)
Geology 231: Understanding the Earth (3 credits)
Computing Science 203: Introductory BASIC Programming (3 credits)
Communications 229: Introductory Interpersonal Communications (3 credits)
Accounting 253: Introductory Financial Accounting (3 credits)
Legal Relations 369: Commercial Law (3 credits)

Computer printouts of the student I.D. numbers for all students with the same start date in four of these courses were pulled from the student record system, and then five I.D. numbers were drawn at random from all of the I.D. numbers in each course. This process was carried out soon after the chosen start date without regard for the students' progress in the course, their demographics, or any other factors. Approximately a month later, the same process was followed for the remaining four courses. The time lapse between the selections was planned in order to facilitate staggering the interviews over a two month period. Only one student of the 40 subsequently declined to be interviewed. The original process, using the remaining I.D. numbers for that course was employed to select an alternate.

Description of Subjects

Following the interviews, the demographics of the 40 students were obtained from the student record system. Although the students had been chosen through simple random selection, and the sample was relatively small, their demographics matched those of the total student population of the University in a number of important ways (Table I). Sixty per cent (24) of the sample were female, and the average age of the students at the time of the interviews was 33.5 years. They came from a variety of educational backgrounds. Six had at least one university degree; ten had taken some university courses; seven had secondary school

diplomas; and five had completed some secondary school. Five students did not report their educational background. The students were also from a variety of geographic locations, mostly in Alberta and British Columbia, more from urban settings than rural. Their motivations for studying with AU varied from specific career reasons to gaining a particular knowledge or skill, earning a degree, or general interest.

Fifteen of the 40 students successfully completed their courses. This constitutes a completion rate of 37.5% if those who formally withdrew within 30 days are included in the calculation, and a completion rate of 43% if they are not included. Of the 25 students who did not complete their courses, only 5 chose to withdraw formally within the first 30 days. The remainder were "withdrawn without credit" by the university when their contract time expired. Table 1 shows how these statistics compare to the total student population at Athabasca University.

TABLE I

Comparison of Characteristics of Sample Subjects with those of Total Student Population

Characteristics		% of Sample (1984-85)	% of Population (1984-85**)
Geographic location:	urban	63	63
	rural	37	37
	Alberta	70	75
	B.C.	18	12
	other provinces and territories	12	13
Sex:	male	40	39
	female	60	61
Education Background:	some high school	12.5	10
	high school graduate	17.5	20
	some university	27.5	25
	university degree	15	14
	college/nursing diploma	10	10
	vocational/technical school	5	10
	other	12.5	11
Age:	less than 25	10	24
	25-34	55	44
	35-44	20	24
	45-54	5	6
	greater than 55	7.5	2
	not known	2.5	-
Persistence in Course:	Completer (1)	43*	44**
	Withdrawn - no credit (2)	57*	56**

(1) Includes failures as well as successful completions.

(2) Either did not start working on the course or stopped working before completion but did not formally withdraw.

* These figures are based on calculations which do not include the five students who chose to withdraw formally within 30 days. This is the way in which completion rates are now calculated at AU.

** Completion rates are for 1983-84, the latest date for which there are population data.

Initial Contact Process

Letters of initial contact (see Appendix I) were mailed to the subjects, and follow up telephone calls were made to personally request participation in the study, answer questions, and set interview times. Subjects were informed during the initial telephone call that the interviews would take approximately 30 minutes, would be conducted by telephone, and that they would be audiotaped. At the same time, rules of confidentiality, and the non-prejudicial nature of participation or non-participation was stressed. If the subject agreed to be interviewed, (only one did not and was replaced with another student chosen at random from the same course), an appointment for the interview was set, and a consent form (see Appendix II) was mailed. The consent form once again stressed that the interview was strictly confidential, and had no bearing on course results.

The Interview

The Critical Incident Technique was selected as the best interview method for soliciting concrete incidents in which something hindered or facilitated the students' persistence in their courses. Students were interviewed 8 to 10 weeks after their official start dates. This was somewhat earlier than originally proposed for the study, and was on the advice of academics and tutors at Athabasca Univer-

sity. The idea was to ensure that students had sufficient time to have some experience with their courses, but not so much time that they had already 'mentally', if not formally, dropped out. Care was taken in this regard to meet the criteria of "qualified observer" which Flanagan, (1954, p. 334-35), points out is very important in obtaining accurate data using the Critical Incident interview. At the beginning of each interview, a second check was made on the competence of the student to evaluate their experience by asking them to rate their progress in the course against the suggested schedule provided with the course materials. In all cases, students were able to do this, as evidenced by such comments as: "drastically behind", "on schedule and working hard", "behind by about two assignments", "a little bit ahead", "have made several attempts to start but am getting nowhere", and "behind schedule and have not touched the course for a week".

The telephone was chosen as the medium of communication for the interview because Athabasca students live in all parts of Canada, and the telephone is the usual mode of communication between them and the institution. Using the telephone also precluded having to choose students who were geographically close to the researcher.

The interviews were all conducted by the author, and were carried out in a pre-determined format. The interview began with an introduction to the interviewer, a review of

the purpose of the study, and assurances about the confidentiality of any information collected or accessed as a result of the study. The standard preamble follows:

> This is Jane Brindley from Student Services at Athabasca University. We arranged this time for an interview. Is this still alright with you? Just in case you have forgotten, I am trying to find out more about what helps and hinders a student in completing a distance education course. I hope that this information will assist in planning and developing better support services. You were chosen to be interviewed because this is your first course with Athabasca, and it is now _____ weeks since your start date. No consideration has been given to your progress in the course. Your responses to my questions will be very helpful no matter where you are with the course right now -- even if you have not started working on it. All information which you provide will be kept anonymously. Your responses will be compiled with those of other students being interviewed, and the information will be analyzed as a whole. No references will be made to your name or that of any other student. Do you have any questions or comments before we begin?

Once the student was ready, the interview was undertaken in the predetermined format, using fairly structured, but open ended questions as follows:

> From talking to other students, I find everyone has certain satisfactions and dissatisfactions in taking a distance education course. I would like to hear about your personal experience. In particular, I am interested in finding out what has helped you to or kept you back from working on your Athabasca course. I would like you to try to remember specific times when something happened which perhaps made a difference -- a

> thought, a feeling, an action, an observation, whatever -- which helped you or blocked you from starting or staying with your course. Think about whether these incidents helped you or hindered you so much that it changed your behaviour or thinking. As you think of these times, perhaps you could jot down a key word for each one. When you are ready, we will start with the most recent one ..... Okay, now before we start, please tell me in your own words what you think I have asked you to do so that we can be sure that we understand each other ..... Now, let's start with the most recent thing that you can remember. Don't worry about how you answer or whether you think you are repeating yourself. Anything will be helpful. I'll start by asking you some questions: Did this incident change your behaviour or thinking about the course?.... Describe what happened?.... What lead up to this?.... When did it happen?.... Why was this such a help (or setback)?....

As the subject finished describing each incident, the interviewer used paraphrasing to ensure accuracy, and to elicit any other details. The interview continued until no further incidents were forthcoming.

Recording and Sorting of Data

All of the interviews were audiotaped. As well, each of the incidents was recorded in writing by the interviewer while the interview proceeded. Each was then checked with the tapes for accuracy and completeness. Each of the incidents was then separately transcribed onto a coloured index card with the I.D. number of the student who had reported it. Two colours were used, one for facilitating incidents, and one for hindering. The incident cards were

then sorted many times by the interviewer into groups with common meaning until they consistently formed basic categories. Following the interviewer's initial formation of categories, the cards were coded, mixed together, and then sorted by two independent raters to check the reliability of the categories.

CHAPTER IV

RESULTS

The 40 students in the study reported a total of 265 incidents, 113 facilitating and 152 hindering incidents. The average number of incidents reported per student was 6.6. One student reported that nothing had hindered his progress while two students could identify no facilitating incidents. The fewest incidents that any one student reported was 2, while the most was 12. The most common number of incidents reported was 6.

Of the 40 students, 15 (37.5%) completed their courses, and 25 (62.5%) did not. The 15 completers reported 108 (40.75%) of the total 265 incidents, 50 (46%) facilitating and 58 (54%) hindering. The non-completers reported 157 (59.2%) of the total 265 incidents, 63 (40%) facilitating and 94 (60%) hindering. Although the total number of incidents reported by each of the two groups, (completers and non-completers) was consistent with their size (ie. completers made up 37.5% of the group and reported 40.75% of the incidents.), there were noticeable differences within particular categories of incidents. (see section on comparison of completers and non-completers, and Tables III and IV.)

Description of Basic Categories

The 265 incidents were sorted into groups of common meaning until 13 basic categories emerged. The categories are bipolar, having the potential to include both hindering and facilitating incidents. Only one category, #9 - Marks Received, had only facilitating incidents reported. With the exception of #9, examples of facilitating (F) and hindering (H) incidents are given for each category.

(1) Student Interaction with the Institution

This category excludes the student's instructional contact (ie: with the tutor) but includes all other contact by telephone, mail/print, or in-person.

F. When she received mail from AU, she felt cared about, "not just a cog in a wheel". It inspired her to work.

F. Athabasca University Magazine gave him a boost; he suddenly did not feel so isolated.

H. She requested the course in December, and did not receive it until February. Her motivation was less.

H. When she enrolled, she had heard that there would be workshops, but no one contacted her to tell her where or when. She thought that this was poor organization.

(2) Personalized Instructional Support

Personalized instructional support is given in addition to the learning package and is usually provided by the tutor and/or course coordinator by telephone. It includes instruction on course content including feedback on assignments, guidance in approach to learning, and encouragement.

F. She talked to her tutor who was very supportive. He referred to her extensive business experience as evidence of her capability.

H. When she called her tutor for the first time, he did not seem receptive or enthusiastic. She thought, "I'm on my own".

H. He discovered that it was difficult to get in touch with the tutor. The telephone was always busy.

(3) Discovery about the Course/Support Materials/Approach

This category includes incidents where students discovered something about the course, their approach to it, or support materials which made a difference to them.

F. She discovered that the workbooks were very helpful in giving suggested approach.

F. He discovered he could get supplementary materials (tapes) from the library. He felt encouraged and

began to work more quickly.

H. When he saw the topics for the research paper, he felt he could not do it because of his own lack of background and resources in the community.

H. She discovered she would need a tape recorder and she did not have one.

(4) Pre-Course Preparation/Prior Expectations

The incidents in this category either happened before the student started the course or are related to expectations held before the course began.

F. She saw a counsellor before she started her first course. He helped her to focus her goals in studying and gave her encouragement which made her feel anxious to start.

F. She attended a study skills workshop before she started her course. It made her aware of many pitfalls and helped her to prepare.

H. When she first opened the package, she felt baffled and overwhelmed by the amount. She realized it was serious. It had been so easy to register -- "like ordering something from Sears".

H. Even before she received her course package, she had doubts about her capability. She thought the course would be difficult and she knew she was weak in Math.

(5) Received Encouragement/Support from Source Outside of the University

Encouragement, support, and instruction were given by family, friends, and colleagues outside of the University.

F. Her husband helped her by asking specific content questions. Teaching him helped her to learn.

F. A colleague at work helped him with the programming exercise.

H. Her husband questioned the value of her being in the course, especially in the evening when "time was taken from him".

H. She felt discouraged when a friend who was also doing a home study course finished because they were going to work together.

(6) Deadlines and Schedules

This category includes incidents resulting from deadlines and schedules imposed by students, their circumstances, or the institution.

F. She ordered all three exams at once so that she would have very strict deadlines.

F. Just before the seminar, he spent lots of time on the course trying to prepare for it.

H. She felt pressured by the time limit (one month) for withdrawal.

She felt it was not enough time to make a decision.

H. He was very busy at work and decided to set the course aside for a month. There were immediate deadlines at work but none in his course.

(7) Personal Realization

These are incidents when students realized something about themselves such as their ability, their progress in the course, their approach to learning, and feelings about the course.

F. After she completed the first programming exercise, she had a feeling of accomplishment. She felt smarter -- like she had an edge.

F. When he compared his work on the course to past experiences where he had been successful, he felt a little ashamed and decided that he could do it.

H. She felt she had neglected the course for too long and that there was no hope.

H. The novelty wore off after six to eight weeks. His enthusiasm dropped and it felt like a pain to sit down and work on the course.

(8) Thoughts about Longer Term Goals

These are incidents where students thought about how the course related to their longer term

goals, usually career and educational.

F. She felt an internal pressure. Time was passing and she did not yet have a degree. She wanted this very badly.

F. When he thought about his long term career goal, he felt like continuing.

H. He took some vocational testing which showed that he might have chosen the wrong field. He felt very discouraged about his course.

H. He was taking the course as a first step toward a career change. When he found out how much education was required to reach his goal, he felt he could never do it.

(9) Marks Received

These incidents are ones where the marks received in the course had a direct effect on the way the student felt about doing the course. Although no students in this group reported hindering incidents, students in circumstances other than this study have reported negative or hindering effects from marks received.

F. She received a very high mark on the first exam and felt a certain amount of satisfaction.

F. He got the results from half-way exams and knew he was on the right track. It made a real difference.

(10) Change in Time Available/Circumstances

This is the largest category and includes all those incidents where students report that something in their life changed which made a difference to the amount of time spent on their course. It includes such things as illness, vacation, work changes, death of a relative, season changes, and move of residence.

F. After she finished work for the summer, she had more time, and has spent more time on her course.

F. She finished a lot of exams and papers in her campus courses. She felt relieved and ready to work on her AU course.

H. There was a death in the family. It kept her away from her course for two weeks.

H. Things were not going well at work. She felt she had to get away. She went to Vancouver for two weeks and did not work on the course.

(11) Course Content

This category includes those incidents which students directly attributed to the subject matter of the course as opposed to the design.

F. When he first opened the package, his initial impression was that the course would be quite interesting. He started reading the textbook right away.

F. Once she sat down and worked on the course, she found it interesting and enjoyable.

H. She was reading a novel which she didn't like. She felt disinterested. It was difficult to make herself work -- to delve deeply enough.

H. When she first looked at the course, she thought she "wasn't getting it because it seemed too simple".

(12) Course Design

This category has to do with the design of the learning package: the instructions given, support materials, examinations, and general layout.

F. He liked the course design. It told him what to look for and gave him a sense of being on the right track.

F. Having a student manual helped her. It got her back on the track with a suggested schedule when she got behind.

H. Her first exam was distressing because the structure was different than what she had expected from doing previous quizzes.

H. The student manual referred to a different kind of computer than his. Figuring out the corresponding information for a home computer was discouraging and frustrating.

(13) Practical Application of Learning

This category includes incidents where students reported being able to relate the course to their experience. It facilitated them in their course if they saw this as being helpful, and hindered them if they saw it as being redundant.

F. When he started, he felt the course was enjoyable because he was familiar with the content and could see practical applications.

F. She spoke to her brother about her course. He told her he thought the content was very relevant to current practise.

H. When she first opened the package, she could see it was redundant to past education and experience. She felt as though she did not want to bother getting started.

Reliability of the Basic Categories

Two different raters, one male and one female, were used to determine the reliability of the basic categories. The male is an administrator at Athabasca University, and is familiar with distance education methods, and the terms used for the categories. He has a doctoral degree in Comparative Education and is 44 years of age. The female rater is employed full-time in an unrelated field, has some post-secondary education, and is 59 years of age. Both are residents of Edmonton.

A sample of 52 incidents, 4 from each category, were selected for the raters to sort. They achieved reliability scores of 94% (first rater) and 92% (second rater). Incidents were miscategorized due, either to lack of understanding of the category description, not reading the incidents completely, or a difference of opinion. The interrater reliability of over 90% on both trials represents strong reliability of the basic categories.

Basic Categories Participation Rate

The participation rate indicates the strength of the categories by showing the extent to which different participants in the study reported the same kind of incidents as hindering of facilitating their goals. Table II shows the participation rate by percentage of students reporting incidents in each category. As well, the actual number of incidents which the percentages represent are shown.

TABLE II

Basic Categories Participation Rate

CATEGORY	%of Students Reporting Incidents in each category	# of Incidents Facili- tating	Hinder- ing
1. Student Interaction with the Institute	20%	6	4
2. Personalized Instructional Support	50%	15	12
3. Discovery about the Course	43%	9	18
4. Pre-Course Preparation/Prior Expectations	35%	5	13
5. Encouragement/Support from Outside the University	43%	20	2
6. Deadlines and Schedules	25%	10	3
7. Personal Realization	63%	16	21
8. Thoughts about Longer Term Goals	10%	2	3
9. Marks Received	20%	9	0
10. Change in Time Available /Circumstances	80%	4	52
11. Course Content	23%	7	5
12. Course Design	38%	5	15
13. Practical Application of Learning	20%	5	4

Comparison of Completers and Non-Completers

Table III shows a comparison of participation rates between completers and non-completers for each category. For both groups, there is at least one subject in each

category. There are noticeable differences between the groups' participation rates in seven of the thirteen categories. The participation rates are partly a reflection of the relative importance attached to each category and for these reasons, it is important to compare persisters and non-completers on this dimension.

Table IV compares completers and non-completers on another dimension. It shows the ratio of facilitating to hindering incidents in each category for the two groups. There are noticeable differences in only four categories. In general, it can be said that the kind of incidents which held the non-completer back, also hindered the completer. Apparently, the completers responded differently than the non-completers to these incidents. Of particular interest is Category 10 - Change in Time Available or Circumstances. Throughout distance education literature, this is cited as the most often provided reason for drop-out (Woodley and Parlett, 1983). This study shows that persisters experience just as many instances of this type of hindrance.

TABLE III

Comparison of Participation Rates in Categories Between Completers and Non-Completers

Category	Completers (15=38%) % of completers (out of 15) reporting incidents	Non-Completers (25=62%) % of non-completers (out of 25) reporting incidents
*1. Student Interaction with the Institution	6% (1)	28% (7)
2. Personalized Instructional Support	47% (7)	52% (13)
*3. Discovery about the Course	53% (8)	36% (9)
*4. Pre-Course Preparation/Prior Expectations	27% (4)	40% (10)
*5. Encouragement/Support from Outside the University	60% (9)	32% (8)
*6. Deadlines and Schedules	40% (6)	16% (4)
*7. Personal Realization	53% (8)	68% (17)
8. Thoughts About Longer Term Goals	6% (1)	12% (3)
*9. Marks Received	33% (5)	12% (3)
10. Change in Time Available/ Circumstances	87% (13)	76% (19)
11. Course Content	20% (3)	24% (6)
*12. Course Design	60% (9)	24% (6)
13. Practical Application of Learning	20% (3)	20% (5)

* Categories where there are noticeable differences between the two groups' participation rates.

TABLE IV

Comparison of Ratios Between Facilitating and Hindering Incidents in Categories for Completers and Non-Completers

Category	Number of Incidents Reported by Completers		Number of Incidents Reported by Non-Completers	
	Facilitating	Hindering	Facilitating	Hindering
1. Student Interaction with the Institution	0	1	6	3
2. Personalized Instructional Support	5	3	10	9
*3. Discovery about the Course	7	6	2	12
*4. Pre-Course Preparation /Prior Expectations	2	3	3	10
5. Encouragement/Support from Outside the University	10	1	10	1
*6. Deadlines and Schedules	7	1	3	2
7. Personal Realization	6	7	10	14
8. Thoughts About Longer Term Goals	0	1	2	2
9. Marks Received	5	0	4	0
10. Change in Time Available/Circumstances	2	23	2	29
11. Course Content	2	1	5	4
*12. Course Design	2	10	3	5
13. Practical Application of Learning	2	1	3	3
TOTALS	50	58	63	94

* Categories where there are noticeable differences between completers and non-completers with regard to the ratio between hindering and facilitating incidents.

CHAPTER V

DISCUSSION

Statement of Results

The findings of the study address the three research questions posed. 1) The students sampled were able to identify significant concrete experiences which either hindered or facilitated their progress in distance education. 2) Similarities and differences were found between completers and non-completers. 3) Factors identified by students in the study as being significant in their impact on persistence or withdrawal can contribute to the development of a model of attrition for distance education students, to planning and evaluating retention strategies, and to formulating future attrition research.

That all students interviewed were able to identify significant experiences which affected their persistence can probably be attributed to the nature of the interview which took the emphasis completely away from the students' progress in their courses, and placed it on their experiences. Rather than being asked to rationalize a chosen behaviour, they were simply asked to relate their experiences. In this way, the study was successful in producing data that shows the relative significance to students of some factors which

influence drop-out and persistence decisions in distance education (Table II). The participation rates reported in Table II indicate the strength of the categories by showing the extent to which different participants in the study reported the same kind of incident as hindering or facilitating their goals. As well, differences and similarities between completers and non-completers emerged, both in participation rates in various categories and in the ratio of facilitating to hindering incidents within particular categories (Table III and IV). Although the total number of incidents reported by each of the two groups was relative to their respective size (for example, completers made up 37.5% of the group and reported 40.75% of the incidents), the non-completers reported a higher overall ratio of hindering to facilitating incidents. It is noteworthy that both groups reported more hindering incidents than facilitating ones. This finding probably reflects the difficulty of study at a distance for adult part-time students.

Differences and similarities within particular categories are addressed below along with other major findings.

Change in Time Available or Circumstances

By far the strongest category was 'Change in Time Available or Circumstances', in which 80% of students reported incidents (Table II). In total, 56 incidents were

reported, 52 of which were hindering (Table II). This finding is consistent with Bean and Metzner's (1985) model of attrition which emphasized the impact of the external environment on adult part-time students. It is also consistent with the study by Rekkedal (1981) who concluded that the most significant factors in drop-out from distance education were not inherent in the study method, but rather were the same factors which affect all adult part-time students, namely, competing demands for their time and energy and unforeseen changes in their circumstances.

The highest ratio of hindering to facilitating incidents (52 to 4) was reported in the 'Change in Time Available/Circumstances Category' (Table II). Both completers and non-completers had high participation rates, 87% and 76% respectively (Table III). However, it is significant that the persisters reported almost as many hindering incidents in this category as the non-completers (Table IV).

Throughout the distance education literature, a change in circumstances is the most often provided reason for drop-out. While the findings of this study support this notion, they also show that the kind of incident which held non-completers back also affected completers. Apparently, the completers responded differently to the incidents. An interactional model of attrition for distance education would assist in examining how a change in circumstances interacts with other variables, such as the perceived

utility of the course and academic ability, to produce persistence or a withdrawal decision.

Personal Realization

The category with the second highest participation rate (63% of students reported incidents) was 'Personal Realization', reflecting incidents when students became aware of something about themselves which affected their persistence, such as suddenly feeling capable of study (Table II).

Awareness or personal realizations are not specifically referred to in the literature, but personal development is. Lenz and Schaevitz (cited in Greenfeig and Goldberg, 1984) talked about adult students' "... renewed search for identity, because many returning adults have neglected their own goals and devoted most of their energies to helping others attain their goals" (p.81). Following from this, Bean and Metzner (1985) discussed how the adult student's intellectual development through their course work contributed to their personal development. They went on to point out that both Spady and Tinto "... concluded that students' perceptions of their intellectual development was a personal development factor that was positively associated with their persistence in college" (p. 523), and that this conclusion was supported by several studies of other researchers. More research is required to explore the kinds of personal

realizations which affect persistence, and to test the reliability of this category as a strong factor. In this study, personal realization was found to be a important factor.

In the 'Personal Realization' category, there were not significantly more hindering incidents (21) than facilitating incidents (16) reported (Table II). More non-completers (68%) than completers (53%) reported incidents in this category but the ratio of facilitating to hindering incidents was about the same for both groups (Tables III and IV). It may be that the non-completers are less personally aware than persisters on entry, and hence experience more personal realizations as a result of attempting studies, but further research is required before conclusions can be reached.

Personalized Instructional Support

Fifty per cent of students reported incidents in the category 'Personalized Instructional Support' (Table II). This category includes incidents related to the academic support which students receive from their tutors.

The strength of the category is consistent with findings that tutor interaction is important to persistence in distance education (Rekkedal, 1981; Woodley and Parlett, 1983; Sweet, 1982). However, it should be noted that not all interaction is perceived as positive. Although the

study showed that instructional support from the tutor is a powerful factor in persistence, it also showed that the effect can be negative as often as it is positive. About an equal percentage of completers and non-completers reported incidents in this category, and both groups reported almost as many hindering incidents as facilitating (Tables III and IV). Hindering incidents usually occurred when the tutor was perceived as not caring about the student. Sweet (1982) discussed the need for instructors to be "responsive and supportive in their interactions with students". (p. 8). In a review of literature on attrition and retention in community colleges, Rounds (1984) cited a large number of studies which pointed to the need for improvement of faculty training in instructional approaches. She quoted from Moore: "Too many teachers consider the task of teaching the high risk student ... to be academic social work" (Rounds, 1984, p. 8). She concluded that "... there remain on campuses ... many of the more traditional, academically oriented instructors who continue to feel that, while underprepared students may have the right to an education, it should not be in <u>their</u> courses" (p. 10). This type of attitude is a concern for open distance education universities where, on one hand, traditional academics are recruited to enhance academic quality and institutional credibility while, on the other hand, non-traditional students (older, part-time, in full-time employment) are attracted by the openness and flexibility.

Discovery About the Course

The category, 'Discovery about the Course' had a participation rate of 43% (Table II), and included incidents when the student found out something about the course which he or she had not known previously. The incidents usually occurred when the students received their course packages subsequent to registering. Of the total of 27 incidents reported, 18 were hindering (Table II). A higher percentage of the completers (53%) than non-completers (36%) reported incidents in this category (Table III). However, while the completers had almost an equal number of hindering and facilitating incidents, the non-completers had a 12 to 2 ratio of hindering to facilitating incidents in this category (Table IV). In other words, although a smaller percentage of drop-outs than completers made discoveries about the course which affected their persistence, the discoveries which they did make were a hindrance to them.

Although attrition literature does not specifically discuss how discoveries about courses or the institution affect persistence, some of the most commonly recommended retention strategies are entry counselling and academic advising, and orientation programs which "present a meaningful and accurate picture of the institution". (Lenning et al., 1980, p. 97). These strategies are obviously intended to avoid 'surprises' for the student. More research is needed to see why some students experience this and not

others. For example, it may be that those students with no post-secondary experience reported most of the incidents in this category.

Encouragement/Support from Outside the University

Forty-three per cent of the students reported incidents when support (or lack of it) from outside of the university had an impact on their persistence (Table II). The strength of the category supported Bean and Metzner (1985) in their premise that external encouragement and support were important to the persistence of adult part-time students.

Two important findings emerged about this category. The first is that almost all incidents were facilitating (20 out of 22, Table II). The second is that, although the ratio between facilitating and hindering incidents (10 to 1) was the same for completers and non-completers, the completers reported a much higher percentage of incidents (60%) than the non-completers (32%). The completers perceived more support from outside the university for their studies than did the non-completers. It is not clear whether they actually received more support, were more skilled in obtaining it, or were in a better position to receive it than were the non-completers.

Course Design

The next highest participation rate (38%) was in the category, 'Course Design', which included all incidents to do with the course package itself: the instructions given, support materials, examinations, and general layout (Table II). For example, a number of students found it difficult to know where to start when they opened the course package or found certain instructions confusing.

Woodley and Parlett (1983) referred to "badly designed course packages" (p. 6) as contributing to attrition at The Open University in Britain, and Bartels (1982) addressed the issue of the distance education course author's tendency to 'overwrite' the package because it would be seen and 'judged' by colleagues. Fifteen of the 20 incidents reported by students in the 'Course Design' category were hindering (Table II). Tables III and IV show that a much higher percentage of completers (60%) than non-completers (24%) reported incidents in this category, and they also had a higher ratio of hindering to facilitating incidents (10 to 2) compared to the non-completers (5 to 3). This may have been due to the completers having more interaction with their course materials or that they were more adept at recognizing problems with the package. At any rate, the incidents did not keep them from persisting in their courses so certain other variables must have been present which enabled them to continue despite problems with

the course packages. One tentative conclusion from these findings may be that distance education course design is not as important a factor as is currently thought.

Pre-Course Preparation/Prior Expectations

The 'Pre-Course Preparation/Prior Expectation' category had a participation rate of 35% (Table II), and included incidents which occurred prior to starting the course (such as seeing a counsellor) or occurred as a result of expectations held before starting the course (such as doubting one's academic abilities). Thirteen out of the 18 incidents reported in this category were hindering.

This finding provides further support for those studies which recommend retention strategies such as pre-enrolment support services (Lenning et al., 1980; Rounds, 1985; Pantages and Creedon, 1978). Tables III and IV show that only 27% of completers compared to 40% of non-completers reported incidents in this category, and the non-completers reported a much higher ratio of hindering to facilitating incidents (10 to 3) than did the completers (3 to 2). It may be that the same factors which motivate completers in their courses motivate them to seek information and other types of assistance (skills assessment, counselling, academic advising) prior to starting their courses, or perhaps they are more experienced students. However, it is clear that this category of incidents was more significant

in a hindering way for the non-completers than for the completers.

Deadlines and Schedules

One quarter of the students reported incidents in the 'Deadlines and Schedules' category (Table II). This category included incidents when students' persistence was affected by either the presence or absence of deadlines and/or schedules. Ten of the 13 incidents were facilitating and, in all cases, had to do with the presence of deadlines, either self-imposed or imposed by others. A much higher percentage of the completers (40%) reported incidents in this category than did the non-completers (16%, Table III). Table IV shows that the completers had a noticeably higher ratio of facilitating to hindering incidents (7 to 1) than the non-completers (3 to 2).

These findings are consistent with the results of comparative studies of institutional 'pacing' and 'self-pacing' practices in distance education institutions which consistently demonstrate higher completion rates for students who are paced by institutional deadlines and schedules (see, for example, the studies cited by Coldeway, 1982a, p. 33). A research study by DiSilvestro and Markowitz (1982), which reported on the relationship between learning contracts and correspondence study, showed that strict contracts consistently helped students to get a prompt start

but did not influence completion rates. The results of this study showed that the presence of deadlines were reported as having a positive effect, but were a significant factor only for the completers. It may be that the non-completers did not know how to schedule their studies and did nothing to use deadlines in the same way as the completers did. For the most part, the deadlines which the completers mentioned were self-imposed.

Course Content

Twenty-three per cent of students reported incidents in the 'Course Content' category (Table II). This category included incidents when students reported experiences to do with the subject matter of the course as opposed to its design, and usually had to do with level of interest. Twelve incidents were reported in total, five hindering and seven facilitating. Unlike the findings in the category, 'Course Design', marked differences were not apparent between completers and non-completers. Although non-completers reported nine of the 12 incidents, the participation rates by students were similar for both groups (Tables III and IV). There were no strong trends in either a facilitating or hindering direction. It may be that, for one or two of the non-completers, course content was an important factor which would account for more incidents being reported by them. Course content, as it relates to the student's

level of interest, has been mentioned as a factor in persistence in distance education. Bartels (1982) noted that drop-outs were less satisfied than persisters with course content and emphasized the importance of students being able to choose courses according to their interests.

Student Interaction with the Institution

There were three basic categories with a 20% completion rate (Table II). The first of these was 'Student Interaction with the Institution' which included all contact which the student had with the institution by mail, telephone or in person, with the exception of academic support received from the telephone tutor. While this did not appear to be a significant factor for completers (only one reported an incident), it appeared to be of some importance to the non-completers (seven reported incidents, Table III). Out of the nine incidents reported by non-completers, six were facilitating but apparently not enough to see them through to course completion. It is of note that students reported both direct effects of having contact, such as "giving them a boost", and indirect effects, such as getting a bad impression of the institution. It appears that just as tutor contact can have both a positive and negative impact on persistence, so can other types of student/institution contact.

Marks Received

The second category with a 20% participation rate was 'Marks Received' (Table II). All incidents in this category reported by students were facilitating (Table II) but other students have reported to Athabasca University counsellors the negative impact of low marks on persistence. Low grades as a negative variable in persistence is also supported by the literature (see, for example, Woodley and Parlett, 1983). A higher percentage of completers (33%) than non-completers (12%) reported incidents in this category (Table III). The completers who reported incidents in this category had progressed far enough in their studies to receive marks, had the ability to attain high marks, and were motivated by their achievement. The same applies to the non-completers but there were fewer of them in this category.

Practical Application of Learning

The third category with a 20% participation rate was 'Practical Application of Learning' (Table II). This category included incidents where students were able to relate the content of their studies to their experience. The incidents were facilitating to the extent that students saw their studies as useful for practical application and/or their experience as helpful to their studies. There were almost an equal number of facilitating and hindering

incidents (Table II). The incidents were viewed as hindering to the extent that their studies were seen as redundant to their experience and, hence, of little use. Given the emphasis on utility of studies in the literature on adult part-time students (Bean and Metzner, 1985), it is somewhat surprising that more students did not identify this category as a significant factor. However, combining this category with 'Thoughts about Longer Term Goals' might have raised the participation rate somewhat. Students described the incidents in these two categories differently so they are reported separately, but they both relate to utility of studies as defined by Bean and Metzner (1985).

The participation rates for completers and non-completers were identical in the 'Practical Application of Learning' category and there was no marked difference between the two groups in the ratio between facilitating and hindering incidents.

Thoughts about Longer Term Goals

The last and smallest category was 'Thoughts about Longer Term Goals' with a participation rate of 10% (Table II). It could be argued that the small number of students (four) reporting does not warrant a separate category. However, these incidents were described differently than those in the preceding category, 'Practical Application of Learning', which would be the most closely related set of

incidents. These were incidents when students related their studies to long-term goals as opposed to immediate application. These were facilitating to the extent that the student already had strong commitment to a goal and knew what was required to reach it. They were hindering if the student had weak goal commitment or was unsure what was required to reach the goal. There were only five incidents reported in this category, three hindering and two facilitating (Table II). As in the previous category, this is surprising considering that adult students are often reported to take courses for career reasons (Bean and Metzner, 1985).

Implications for a Conceptual Model

It is clear from the findings of this study, and the review of the literature, that the attrition process is a complicated mix of student, institutional, and environmental variables which interact over time to produce a drop-out decision. So far, the conceptual model which appears most useful in describing this process in the distance education context is the one developed by Bean and Metzner (1985), specifically for adult, part-time commuter students.

Their model proposed that withdrawal decisions were based on four major categories of variables: 1) background and defining characteristics of the student such as age, enrolment status, and gender; 2) academic variables such as

study habits and course availability; 3) environmental variables such as finances, hours of employment, outside encouragement, and family responsibility; and 4) psychological variables such as perceived utility of studies, satisfaction, goal commitment and stress.

Bean and Metzner proposed that these four sets of variables could contribute directly, indirectly or could interact to produce outcomes of performance (marks) and/or an intention to leave which could lead to a drop-out decision. They described four ways in which the model was interactive.

Firstly, there were direct effects between variables or between variables and outcomes, such as that which a lack of course availability might have on a decision to drop out. Secondly, there were direct effects presumed most important, such as the impact of study habits on marks. Thirdly, there was provision for the possible effects of lesser variables such as Tinto's (1975) social integration variables. Lastly, and probably most importantly, were the compensatory interaction effects among sets of variables. The simplest way to define these is to illustrate with an example used by Bean and Metzner. It has been shown that environmental variables are an important factor in persistence for adult students. At the same time, it has been shown that academic variables are an important factor in persistence for almost all students. Bean and Metzner proposed that, when both of

these sets of variables were favourable to persistence, the student would continue, and, if both sets were unfavourable, the students would most likely drop out. However, if academic variables were favourable but environmental variables were not, adult students would still be likely to drop out because the academic variables would not compensate for poor environmental support. On the other hand, if there were favourable environmental conditions but poor academic variables, the adult student would still be likely to persist because, for them, environmental support could overcome the academic variables.

It is clear that the content of the sets of variables and the relative importance of variables in an interactional model of attrition is entirely dependent on the particular student population, and what students perceive and experience as being important to their persistence. The factors which were reported as being critical to persistence by students in this study can be used to modify the Bean and Metzner model to reflect the distance education context. The four major categories of variables, the outcomes, and the interactional effects of the model appear appropriate, but some of the context within the major categories requires change. For example, one sub-category under 'Academic Variables' is 'absenteeism' (Bean and Metzner, 1985, p. 491). This is obviously not appropriate to the distance education context.

Once the Bean and Metzner model has been modified for the distance education context, it could then be tested for reliability and validity in the same way that the Tinto model has been (Terenzini and Pascarella, 1980), and could be used to examine empirically the relative significance of variables which are associated with drop-out in the distance education literature.

It is proposed that the four major categories of variables in the model could be modified as follows, using findings from this study. Additions are marked with an asterisk and proposed deletions are noted. Some factors have been left unchanged. This recognizes the appropriateness of the rationale for inclusion given by Bean and Metzner (1985) to the student population addressed in this study. The rationale for changes to the model is provided immediately below the following summary of the modified categories.

(1) Background and Defining Variables

- age
- enrolment status (*specify program/non-program)
- residence (*urban/rural)
- educational goals
- high school performance (*if applicable)
- *highest level of education achieved
- ethnicity (delete, unless studying special groups)
- gender

(2) Academic Variables

- study habits
- major certainty
- *information) (intended to address 'Pre-Course Preparation/
- *orientation) Prior Expectation' and 'Discovery about Course')
- academic advising
- *study skills assistance
- *assessment (intended to partially address 'Discovery about Self')
- *career planning
- *deadlines and schedules/pacing
- *personalized instructional support
- *course content
- *course design
- course availability
- absenteeism (delete)

(3) Environmental Variables

- finances
- hours of employment
- outside encouragement
- family responsibilities
- *change in time available/circumstances
- opportunity to transfer

(4) Psychological Outcomes

- utility (*includes 'Practical Application' and 'Longer Term Goals')
- satisfaction
- *personal realization
- goal commitment (*defined as importance of completing the course)
- stress (delete in favor of more explicit variables)

The first category, 'Background and Defining Variables', was modified using the information about defining characteristics of the population (Table I). In the Athabasca University context, enrolment status can be widely defined as program and non-program. Since commitment to a program of studies has been seen as a factor in persistence

in the literature, this wide definition was seen as an important variable to test.

Residence is defined as either urban or rural. It is commonly thought that distance education students are mainly from rural areas which do not have a campus-based institution, but, in fact, over 60% of the Athabasca University student population are from urban areas. It is speculated that the two groups are different in their motivations for choosing distance study, and in the outside resources which are available to them, such as library facilities. For this reason, location is commonly used as a defining characteristic in institutional analyses of the student body, so it is important to test its significance for persistence.

The Athabasca University open admissions policy means that students have much more heterogeneous educational backgrounds than at institutions with more specific entrance requirements. Since past educational achievement and experience are consistently noted throughout the literature as being important to persistence, this characteristic was added to the model. High school performance was left in because it has been shown to be an important variable, but students at an open university may not necessarily have attended high school.

Ethnicity has never been an important defining characteristic of Athabasca University students nor does it appear as an important factor in the distance education literature. For this reason, it should be deleted unless special groups, such as native students, are being studied.

A number of factors have been added to the 'Academic Variables'. These all fall into the category of retention strategies to be tested. Bean and Metzner (1985) suggest that, if major efforts are being made by an institution to address attrition through particular programs, these should be added as variables in this category. The way in which the additional factors reflect the findings of the study is addressed more fully in the next section, 'Implications for Retention Strategies'.

Change in time available and circumstances was the only factor added to 'Environmental Variables'. This was the factor from the study which had the highest proportion of students reporting incidents. It is also the factor affecting persistence in distance education which is most often cited in the literature.

Under 'Psychological Outcomes', there was one addition and two clarifications of definitions. 'Personal Realization' was added because this was reported by 63% of respondents to the study and it was seen as a psychological outcome of their experience in their courses which had a

direct impact on their persistence. An example of this was a realization about being capable of university work. Utility was redefined to reflect the way in which students in this study described it, which included immediate practical application of studies and relation to longer term goals. Goal commitment was redefined as commitment to completing one course as opposed to a program because this more accurately reflected the aspirations and behaviours of the student population. As well, the defining characterstic of program/non-program was already included in the first set of variables.

With the modifications described above, the Bean and Metzner model appears appropriate to the distance education context and, as such, can be used as a framework to more clearly set out what is already known about attrition and as a guide for future studies.

Implications for Retention Strategies

The emphasis in attrition research should be on prevention, not prediction. Once significant factors affecting persistence have been identified for a given population, then retention strategies can be developed and evaluated as variables within a model, as described in the previous section, 'Implications for Conceptual Models'.

It is encouraging to see from this study that some

students persist despite experiences which they perceive as negative. It may be that they have better coping strategies, more experience and knowledge, a learning style more naturally suited to distance study, and/or a host of other characteristics which predispose them toward persistence. Clearly, more information is needed about persisters. What we do know from this finding is that there probably are avoidable drop-outs. Hence, if retention strategies can be developed which change students' experiences or the way in which they perceive or respond to certain experiences, attrition rates may be lowered as a result. As Lenning et al. (1980) state:

> The task is not to eliminate attrition, a task that is unfeasible as well as undesirable. Instead, the task is to assist a relatively small percentage of students to persist...A shift of even a few percentage points in retention statistics could benefit individual students and have a major impact on the institution. (p. 29).

Recommendations for retention strategies can affect almost all areas of an institution. The emphasis in this section will be on those concerning student support services, particularly advising and counselling programs.

Recruitment and Information

Students need accurate information on which to base their choice of courses, programs, and mode of study. Many students in this study felt that there was too much emphasis

in the information they received prior to enrolment about the flexibility, open admissions and ease of enrolment, and not eough about the realities of being a distance education student. Many students were shocked by the sheer size of the course packages while others did not realize how much they would be on their own. Accurate information programs prior to enrolment not only provide a sound base for decision-making, but they also bring students' expectations more in line with reality. For example, group information sessions can include an introduction to sample course materials.

Orientation Programs/Assessment Services

Orientation programs are important for some of the same reasons as information programs. However, they should provide the student with an opportunity to find out information about themselves as well as information about the institution. This helps the student to see how well his or her characteristics match institutional demands. Sometimes, adjustments can be made to enhance the fit. Student assessment should not be limited to traditional types of aptitude tests, but should challenge the individual to examine such factors as study habits, reasons for returning to school, and learning style. For example, if an adult is returning to school for social reasons, or their learning style is one which requires interaction, then distance education may only

be a suitable mode of learning if they have an opportunity to join a study group. Orientation should address ways in which the student can adapt their learning resources to fit their needs. Assessment of basic skills such as writing, reading, and mathematics enables the student to judge his or her readiness for university study and, if necessary, to take remedial courses.

Orientation programs should include an introduction to the kinds of coping skills necessary to deal with unforeseen circumstances. For example, setting up a study schedule which allows a month leeway might enable the student to cope with a family illness. If possible, orientation programs should include significant others to give them an idea of how the students' return to school will affect them, and how they might help. Alternatively, the orientation program can openly address the issue of enlisting the help of others in pursuing educational goals.

Other Counselling Programs

A variety of other counselling programs are required to facilitate persistence. Probably the most important of these are study skills assistance, career planning, and crisis counselling. Study skills programs can teach students skills which will help them to meet the special demands of distance study, from providing an approach to the learning materials to teaching strategies for getting family

support. Career planning helps students to clarify their long-term goals and to see how their study fits into their plans. It may increase the perceived utility of their courses or help them to choose a more appropriate direction. Crisis counselling, with an emphasis on teaching coping strategies, can help students through unforeseen circumstances such as marriage break-up, employment layoff or illness.

Staff Development Role for Counsellors

Counsellors can also play a role in staff development programs with faculty, tutors and staff who have frequent interaction with students. Students in the study emphasized the need to feel cared about and supported by their tutors. Counsellors, because of their professional training, have expertise in communication skills which could be used in staff training programs.

Other Recommendations

It is significant that only 20% of students in the study mentioned contact with the institution other than their tutor contact as being a significant factor in their persistence. Many students had not had any contact with the institution other than the passing of form letters and forms through the mail. They were often surprised and pleased by the interest shown in them by the interviewer. Most often,

they were totally unaware of services available to them. Clearly, the institution must be more proactive in its approach to students. Services should be better publicized and, wherever possible, personal contact of a supportive nature should be made with students.

It should be noted that the same kinds of factors which lead students to withdraw may prevent them from accessing services. A variety of approaches must be tried to find out what strategies and what modes of delivery work best.

Only retention strategies which concern student support services have been addressed here. However, it is recognized that the findings of the study also have implications for other areas such as course content, course design, deadlines and schedules (pacing) and modes of delivery.

Limitations and Future Research

The sample for the study was representative of the population of Athabasca University students in a number of important ways (Table I), and the population at the university is similar to that of a number of other distance education institutes. However, some caution is warranted in generalizing the results across institutions. Major institutional differences in areas such as entrance requirements and intentions of students to transfer or stay should be

considered. It should be noted that the Bean and Metzner model was developed primarily, but not exclusively, for single institution application.

In order to develop the model further, research is needed to confirm or reject factors found to be significant to persistence and to determine their relative importance. For example, evaluative research is needed to test the efficacy of the suggested retention strategies. As well, work is also required to understand better and to test the interactional effects.

Summary

All respondents were able to identify significant concrete experiences which hindered or facilitated their persistence in distance education courses. There were significantly more hindering experiences reported than facilitating ones, which probably reflects the great number of possible difficulties faced by adult, part-time students studying at a distance. Similarities and differences were found between completers and non-completers. There was support for the premise that there are avoidable drop-outs in the finding that persisters often reported the same kind and number of hindering incidents as did the non-completers.

Thirteen basic categories emerged from the 265 incidents reported. The categories which emerged as most

significant, as indicated by the proportion of students reporting them, were: 'Change in Time Available or Circumstances', 'Personal Realization' and 'Personalized Instructional Support'.

Factors identified by students in the study as being significant, along with the defining characteristics of the population, were used to modify an existing model of attrition (Bean and Metzner, 1985) to reflect the distance education context of Athabasca University. Findings were also used to propose retention strategies and to suggest areas for future research.

REFERENCES

Andersson, B.-E., and Nilsson, S.-G. Studies in the reliability and validity of the critical incident technique. Journal of Applied Psychology, 1964, 48, 398-403.

AU trends, #1. Athabasca: Athabasca University, Office of Institutional Studies, 1983.

AU trends, #2. Athabasca: Athabasca University, Office of Institutional Studies, 1985.

AU trends, #3. Athabasca: Athabasca University, Office of Institutional Studies, 1986.

Bartels, J. Dropout at the distance university in the Federal Republic of Germany. Paper presented at the annual forum of the Association for Institutional Research, Denver, 1982.

Bartels, J. Study experiences of graduates and drop-outs at the FernUniversitat. Unpublished paper. Hagen: FernUniversitat, 198_.

Bartels, J. and Willen, Birgitta. Dropout: Problems of comparing dropout in different distance education systems. Paper presented to the 13th world conference of the International Council of Distance Education (ICDE), Melbourne, 1985.

Bean, J.P. and Metzner, B.S. A conceptual model of nontraditional undergraduate student attrition. Review of Educational Research, 1985, 55, 485-540.

Boshier, R. Relationship between motives for participation in and dropout from adult education. Psychological Reports, 1978, 43, 23-26.

Brodzinski, F.R. Adult learners -- the new majority: A demographic reality. In A. Shriberg (ed.), Providing student services for the adult learner. New Directions for Student Services, no. 11. San Francisco: Jossey-Bass, 1980.

Coldeway, D.O. Learner characteristics and success. In I. Mugridge and D. Kaufman (eds.), Distance Education in Canada. London: Croom Helm, 1986.

Coldeway, D.O. Recent research in distance learning. In J.S. Daniel, M.A. Stroud, and J.R. Thompson, (eds.) Learning at a distance: A world perspective. Edmonton: Athabasca University/International Council for Distance Education, 1982a.

Coldeway, D.O. What does educational psychology tell us about the adult learner at a distance? In J.S. Daniel, M.A. Stroud, and J.R. Thompson, (eds.) Learning at a distance: A world perspective. Edmonton: Athabasca University/International Council for Distance Education, 1982b.

Coldeway, D.O., MacRury, K., and Spencer, R. Distance education from the learner's perspective: the results of individual learner tracking at Athabasca University. Report from Project REDEAL. Edmonton: Athabasca University, 1980.

Cross, K.P. Foreword. In R.H. Miller (ed.), Providing access for adults to alternative college programs. New Rochelle: The Scarecrow Presss for the Alliance, 1981.

Daniel, J.S. and Marquis, C. Interaction and independence: Getting the mixture right. Teaching at a Distance, 1979, 14, 29-44.

Daniel, J.S., Stroud, M.A., and Thompson, J.R. (eds.) Learning at a distance: A world perspective Edmonton: Athabasca University/International Council for Distance Education, 1982.

Department of Defense, Commerce and Transportation. Student attrition at five federal service academies. Washington: Comptroller General of the U.S., 1976.

DiSilvestro, F.R., and Markowitz, H. Jr. Contracts and completion rates in correspondence study. Journal of Education Research, 1982, 75, 218-221.

Finkel, A. Designing interesting courses. In J.S. Daniel, M.A. Stroud, and J.R. Thompson (eds.) Learning at a distance: A world perspective. Edmonton: Athabasca University/International Council for Distance Education, 1982.

Flanagan, J.C. The critical incident technique. Psychological Bulletin, 1954, 51, 327-355.

Flinck, R. Correspondence education combined with systematic telephone tutoring. Malmo: Hermods, 1978.

Greenfeig, B.R. and Goldberg, B.J. Orienting returning adult students. In M.L. Upcraft (ed.), Orienting students to college, New Directions for Student Services, #25. San Francisco: Jossey-Bass, 1984.

Heffernan, J.M., Macy, F.U., and Vickers, D.F. Educational brokering: A new service for adult learners. New York: National Center for Educational Brokering, 1976.

Holmberg, B. Recent research into distance education. Hagen: FernUniversitat, 1982.

Kennedy, D. and Powell, R. Student progress and withdrawal in the open university. Teaching at a Distance, 1976, 7, 61-75.

Lenning, O.T., Beal, P.E., and Sauer, K. Retention and attrition: Evidence for action and research. Boulder: National Center for Higher Education Management Systems, 1980.

Losty, B.P. and Broderson, D.D. Who Succeeds? A comparison of transcripts of graduates and inactive students of a nontraditional bachelor of arts program. Alternative Higher Education: The Journal of Nontraditional Studies, 1980, f25, 91-99.

McInnis-Rankin, E. and Brindley, J. Student support services. In I. Mugridge and D. Kaufman (eds.), Distance education in Canada. London: Croom Helm, 1986.

Pantages, T.J. and Creedon, C.F. Studies of college attrition: 1950-1975. Review of Educational Research, 1978, 48, 49-101.

Pascarella, E.T. and Terenzini, P.T. Interaction effects in Spady's and Tinto's conceptual models of college drop-out. Sociology of Education, 1979a, 52, 197-210.

Pascarella, E.T. and Terenzini, P.T. Predicting freshman persistence and voluntary dropout decisions from a theoretical model. Journal of Higher Education, 1980, 51, 60-75.

Pascarella, E.T. and Terenzini, P.T. Student-faculty informal contact and college persistence: a further investigation. Journal of Educational Research, 1979b, 72, 214-218.

Paul, R.H. Athabasca University. In I. Mugridge and D. Kaufman, (eds.), Distance education in Canada. London: Croom Helm, 1986.

Phythian, T. and Clements, M. Dropout from third level maths courses. Teaching at a Distance, 1982, 21, 35-45.

Report of the task force on mature students. Edmonton: University of Alberta Senate, 1983.

Rekkedal, T. Introducing the personal tutor/counsellor in the system of distance education. Paper presented at the annual conference of the European Home Study Council, Madrid, 1981.

Rounds, J.C. Attrition and retention of community college students: Problems and promising practices. Marysville, Calif: Yuba College, 1984. (ERIC Document Reproduction Service No. ED242377).

Shale, D. Attrition: A case study. In J.S. Daniel, M.A. Stroud and J.R. Thompson (eds.) Learning at a distance: A world perspective. Edmonton: Athabasca University/International Council for Distance Education, 1982.

Smyrnew, J. Characteristics of Athabasca University students. Institutional studies report no. 5. Edmonton: Athabasca University, 1983.

Spady, W. Dropouts from higher education: Toward an empirical model. Interchange, 1971, 2, 38-62.

Sweet, R. Distance education: the personal response. Paper presented at the American Educational Research Association, New York, 1982.

Taaffe, T. and Rocco, T.M. Access to higher education for adults. In R.H. Miller (ed.), Providing access for adults to alternative college programs. New Rochelle: The Scarecrow Press for the Alliance, 1981.

Taylor, E. A study of attrition in the Regents external degree program. Research report. Albany: Institutional Research Office, Regents External Degree Program, 1983.

Tele-universite. L'evolution et les caracteristiques de la population etudiante. (Juin, 1986), 31 pp.

Terenzini, P.T. and Pascarella, E.T. The relation of students' precollege characteristics and freshman year experience to voluntary attrition. Research in Higher Education, 1978, 9, 347-366.

Terenzini, P.T. and Pascarella, E.T. Toward the validation of Tinto's model of college student attrition: A review of recent studies. Research in Higher Education, 1980, 12, 271-282.

Thompson, G. The cognitive style of field-dependence as an explanatory construct in distance education. Distance Education, 1984, 5, 286-293.

Tinto, V. Dropout from higher education: A theoretical synthesis of recent research. Review of Educational Research, 1975, 45, 89-125.

van Wijk, T. Drop-out in distance education: fallacies and remedies. Unpublished paper, Pretoria: University of South Africa, 1983.

Woodley, A. and Parlett, M. Student drop-out. Teaching at a Distance, 1983, 24, 2-23.

Woolsey, L.K. The critical incident technique: An innovative qualitative method of research. Canadian Journal of Counselling, 1986, 20, 242-254.

APPENDIX I - LETTER OF INITIAL CONTACT

Dear .....

The Student Services unit is currently conducting a study regarding completion of distance education courses. Your name was chosed at random from all students in their first course with Athabasca University. We are interested in what you can tell us about your experience with the course regardless of your current status in it.

Someone from the Student Services office will give you a call within the next week to find out if you are willing to participate in this study. Appointments for a telephone interview (approximately 30 minutes in length) will be required of each participant. Should you decide to take part in the study, you will have the right to withdraw at any time. Any personal information obtained during the interviews will be held in confidence. Results of the study will be reported in grouped form only, with no names attached to it.

It is our hope that this study will give us more information about what helps and hinders students in completing distance education courses. As a result, we anticipate being able to design more effective counselling programs to aid students in their studies.

If you have further questions about the project, please feel free to discuss them when we call you. If you decided you would like to be involved with the study, an appointment for an interview at a time convenient to you will be set.

Thank you for your consideration.

Sincerely,

Jane E. Brindley

APPENDIX II - CONSENT FORM

Consent Form for Participation in the Study:

"Completion and Attrition in Distance Education"

The purpose of this project is to gather information which will be helpful in designing counselling programs for distance education students. Participants in this study will be interviewed once by telephone for approximately thirty minutes. All individual interview information will be kept confidential. Participants' names will not be attached to the reported data; it will be presented in group format only. Participants have the right to withdraw from the project at any time without prejudice to their studies at Athabasca University.

I, _____, give my consent to participating in the above study.

Name: _____
(please print)

This study is being carried out by the Student Services Unit at Athabasca University. Any further information which participants require may be obtained by telephoning the Edmonton office at 432-1550. Charges may be reversed on long distance calls.